

Math II-2

Activities

Basic Patterns

A Year of Growing Patterns

Standard II:

Students will sort and classify objects as well as recognize and create simple patterns.

Objective 2:

Identify, duplicate, describe, and extend simple repeating and growing patterns.

Intended Learning Outcomes:

2. Develop social skills and ethical responsibility.
5. Understand and use basic concepts and skills.
6. Communicate clearly in oral, artistic, written, and nonverbal form.

Content Connections:

Content III-1; Describe how people change when seasons change
Language Arts VII-2; Make predictions using text

Math
Standard
II

Objective
2

Connections

Background Information

“John A. Adam says the beauty of nature is revealed by mathematics and the beauty of mathematics is revealed in nature.... Many mathematicians and scientists consider mathematics to be the science of patterns. It is a way for the invisible world to become visible” (Waters, Jen. 8/11/2005. Math, naturally. *The Washington Times*. 0732-8494).

Patterns are found throughout nature, and consequently found all through music and writing. Repeating patterns are quite common, but growing patterns are much more difficult to identify and re-create.

Repeating pattern—a sequence of items repeated over and over without change; it can be repeated and predicted infinitely, (e.g., *ababab*, or *aabbccaabbcc*).

Growing pattern—a sequence of items that repeats, but which decreases or increases with a constant amount. It can also be repeated and predicted infinitely. (e.g., *ababbabbbabbbb* or *aababcabcd*)

Growing patterns are really quite popular in literacy, especially children’s books and songs. As children learn to recognize patterns in all things around them, they are able to make connections between the things they learn and the everyday world. Just as they may recognize a simple repeating pattern, it is important for them to identify growing patterns, as growing patterns are the basis of algebraic reasoning.

One story that blatantly contains a growing pattern amidst its text is the classic tale of *There Was an Old Woman* or *I Know an Old Lady*. With the fly, followed by the spider, and then repeating the fly once

more, ending with the horse followed back down to the fly again, it is evident that the original item increased by one each time, but repeating the previous items in declining sequence.

This growing pattern is seen in other well-known stories/songs such as *The Twelve Days of Christmas*, *This Is the House That Jack Built*, *A-Tooty-Ta*, and *Old MacDonald Had a Farm*. In this activity, we will explore different texts with growing patterns that can be used throughout the year in conjunction with seasonal and/or holiday themes.

Before beginning to teach the following lessons, introduce growing patterns to students (see *Additional Resources* for ideas on teaching the basics of growing patterns). After they have at least a basic understanding of growing patterns (in the mathematical/geometric/numeric sense), tell students you will now be looking for growing patterns in books and songs.

Research Basis

Sutton, J., and Krueger, A. (2002). How does integrated instruction in mathematics affect teaching and learning? *EdThoughts: What we know about mathematics teaching and learning*. 56.

Mathematics need to be taught in a context that connects it to the real world. If it is taught in a strict academic environment, students are not able to build deep understandings and connections to the world around them. “Through classrooms that provide rich problem situations as a vehicle for learning mathematics, students develop a flexible understanding of the disciplines and learn to integrate content and process strands of mathematics, learning when, how and why to use their knowledge to solve unfamiliar problems.”

Annenberg Media. (2007). Defining reasoning and proof: growing patterns. *Teaching Math, Grades K-2*. http://www.learner.org/channel/courses/teachingmath/gradesk_2/session_04/section_03_e.html.

“Kindergarteners reinforce their understanding and ability to reason about counting numbers through examples of growing patterns.... A great deal of reasoning is occurring in this activity. The children begin by describing the pattern and extending it with physical materials. They make conjectures about the pattern and predict the number of tiles in elements that come later in the series. Finally, they make generalization about [what is needed for any place in the sequence], based on the patterns they have discovered. Throughout the...activity, the children explain their reasoning.”

Invitation to Learn

Have the students create a growing pattern using the markers and paper in the center of the table. Tell them if they don't know what a growing pattern is, give their best guess and if necessary, "Ask three before me!"

Tell the students to think about what they know about growing patterns, and ask if they can think of any examples (without looking at other parts of this lesson) of any growing patterns in books or songs.

Instructional Procedures

September

1. Quickly review growing patterns.
2. Read the story, *There Was an Old Lady Who Swallowed a Fly*, by Simms Taback.
 - a) The first time, read all the little comments by the other characters, pointing out all the rhyming words.
 - b) The second time, have the students read along and recite the repeating pattern phrases in the story.
 - c) You can even make up masks for each of the characters (*There Was an Old Lady Who Swallowed a Fly Character Masks*) for the students to act out the story while the story is read.
 - d) When finished, list the elements of the story in correct order. Then list them all again, but in the repeating, growing pattern.
 - e) Read the last page from the book that has the complete sequence again, checking to make sure that all the elements are right, also making certain that the students join with you to reinforce the pattern.
 - f) Place manipulatives (pattern blocks, UNIFIX cubes, stackers, etc.) in centers where small groups can use them to recreate the story. Pull a small group and recreate the pattern on a board using different shapes and colors. You be the "fly" and have the student be the "spider". Have the student draw his/her shape next to yours, then draw your shape above the subsequent character from the story. Continue in like manner through the rest of the story.
3. Tell the students that you are now going to sing a song that has a growing pattern in it. Tell them it has some actions

Materials

- ☐ Markers
- ☐ Journals



Materials

- ☐ *There Was an Old Lady Who Swallowed a Fly*
- ☐ Various Character Masks.
- ☐ Board or chart
- ☐ Markers
- ☐ *Dr. Jean & Friends CD*
- ☐ *Tooty Ta Lyrics*
- ☐ *The Deep Blue Sea*



that they need to follow along with in order to complete the pattern. Then sing Dr. Jean's *Tooty Ta* with the students. When finished, see if they can do the last phrase in order again, repeating the concluding section of the growing pattern.

4. A great book about growing patterns, to use when you teach about colors is *The Deep Blue Sea* by Audrey Wood. Have the students re-create this story in their own way or copy the final picture into a journal. (We will visit this more in Activity #2.)

Materials

- ☐ *The Little Old Lady Who Was Not Afraid of Anything*
- ☐ *There Was An Old Woman Who Swallowed a Bat*
- ☐ Large shoes
- ☐ Pants
- ☐ Shirt
- ☐ Gloves
- ☐ Pumpkin
- ☐ Drum
- ☐ Tambourine
- ☐ Shakers
- ☐ Cymbals
- ☐ Rhythm sticks
- ☐ Journal
- ☐ Halloween stickers



October

1. There are two great stories for October, *The Little Old Lady Who Was Not Afraid of Anything*, and *There Was An Old Woman Who Swallowed a Bat*.
2. If you choose to use *The Little Old Lady Who Was Not Afraid of Anything*, then it would be a great kinesthetic activity for students, or it can easily be acted-out in a "play" by the students as the elements of the repeating pattern are simple to follow.
 - a. This is an exciting one to use with simple musical instruments to represent each of the items in the story: a drum for the shoes (stomp, stomp), a tambourine for the pants (wiggle, wiggle), shakers (castanets, egg shakers, maracas, etc.) for the shirt (shake, shake), cymbals for the gloves (clap, clap), rhythm sticks for the head (nod, nod), and all the kids can shout "Boo Boo" for the head.
 - b. This activity is also easily adapted for students who are shy and don't want to talk, but may be willing to "perform"—especially ESL students. It is also good for those who may not show their skills through "paper and pencil," but can demonstrate understanding more easily through performance.
3. There was an *Old Lady Who Swallowed a Bat* can be expanded by discussing other "Halloween" characters/symbols she could have swallowed. Also have the students create a growing pattern in their journal using Halloween stamps or stickers representing what she ate in the book.

Materials

- ☐ *There Was An Old Woman Who Swallowed a Pie*
- ☐ *Shoes From Grandpa*



November

1. *There Was An Old Woman Who Swallowed a Pie* is a great story for Thanksgiving. One element to use for this story, now that they may be more familiar with the patterning and way the

previous “Old Woman” stories go, is to have them predict what the “old woman” will swallow next.

2. For those who follow the *Houghton-Mifflin* reading program, *Shoes From Grandpa* is included in Unit Four: Family. This is another great story to use for growing patterns, especially as November/December is usually when you are talking about families.

December

1. In December, either of these books can be used to demonstrate growing patterns: *There Was An Old Lady Who Swallowed a Bell* or *The Twelve Days of Christmas*.
2. With *The Twelve Days of Christmas*, many other curriculum areas can be integrated, such as music, art, and writing.
 - a. You can play the song for the students and then have them sing along, which the kids really enjoy.
 - b. Also, you can have students illustrate a class book, *Twelve Days of Christmas Book*, to go along with the song, having each student draw one or two of the elements. Even the student(s) who just has to draw *one* “partridge in a pear tree” will have to do it twelve times!
 - c. Have the students record in their journal something that they would give their “true love” for Christmas and how many they would want to give them! *True Love Book*.
 - d. Finally, you can have the students come up with their own things (as a class shared writing or individually) that they would give someone for each of the twelve days, making that into a class book as well.

Materials

- ☐ *There Was An Old Lady Who Swallowed a Bell*
- ☐ *The Twelve Days of Christmas*
- ☐ CD player
- ☐ *15 Christmas Favorites: Twelve Days of Christmas CD*
- ☐ *Twelve Days of Christmas Book*
- ☐ *True Love Book*
- ☐ Crayons



January

1. January is all about winter, and so is the next story—*There Was A Cold Lady Who Swallowed Some Snow*. What would the students want to swallow from each of the different seasons? If they also chose snow, what would they make when they coughed it back up?

Materials

- ☐ *There Was A Cold Lady Who Swallowed Some Snow*




February

1. Another fun song to sing that follows a growing pattern is *Mother Goose Bird*. This song also has actions that the students must repeat for each new thing and then do continuously while singing the next verse. It makes adults dizzy, but the students love it!

Materials

- ☐ CD player
- ☐ *Dr. Jean & Friends CD*
- ☐ *Mother Goose Bird Lyrics*
- ☐ *This is the House that Was Tidy and Neat*






Materials

- ☐ *There Was a Bold Lady Who Wanted a Star*
- ☐ *There Was an Old Lady Who Swallowed Fly Guy*

2. *This is the House that Was Tidy and Neat* is a cute story about some kids who mess up their home while their mom is out. It is another story that can be acted out or otherwise recreated.

March

1. *There Was a Bold Lady Who Wanted a Star* and *There Was an Old Lady Who Swallowed Fly Guy* are two more wonderful examples of exciting stories that include growing patterns.
 - a. For *There Was a Bold Lady Who Wanted a Star*, discuss different modes of transportation.
 - b. Do a class shared writing activity brainstorming other ways not mentioned in the story that the “Bold Lady” could use to get to the star that she desires.
 - c. In their journals, have students come up with another shape that they might want and a word that would rhyme with that shape to complete the statement. Also, ask what would they want to do with that shape.



Materials

- ☐ *I Know a Shy Fellow Who Swallowed a Cello*
- ☐ Various instruments
- ☐ Sound clips
- ☐ Pictures of instruments
- ☐ *There Was an Ol’ Cajun*

April

1. April can get a little long sometimes. An enjoyable story to break-up the monotony is *I Know a Shy Fellow Who Swallowed a Cello*. Similar to *The Little Old Lady Who Was Not Afraid of Anything*, this story can easily be integrated with musical instruments. If possible, bring in real examples of each instrument, such as a cello, harp, sax, fiddle, cymbal, flute, kazoo, or cascabel; at least have a real picture and sound clips for the instruments (see additional resources for where to find those).
 - a. Refer to the pictures and show how each instrument is used in a different genre of music. Discuss how music changes through time and across different areas of the country/world.
 - b. Again, have the students participate in helping you tell the story by playing each instrument/sound (or showing the picture) at the appropriate time.
2. *There Was an Ol’ Cajun* is a good story to talk about how people are different in different areas of the world. This story takes place in Louisiana. The story is told using the Southern dialect and colloquial terms and the animals that would be found in that area of the country.
 - a. If you have a large population of students from a given area of the world, you could write a version of the story using animal names in their language, or animals native to that area of the world.

May

1. There are a few different stories (including animal versions) about getting ready to enjoy the outdoors: *There Was a Coyote Who Swallowed a Flea*, *There Was An Old Lady Who Swallowed a Trout* (great for talking about different animals that live in the water, expanding on just fish), *There Was An Old Lady Who Swallowed the Sea*, and *Old MacDonald*.
 - a. *Old MacDonald* would have to be modified slightly in that you would need to repeat each previous animal sound at the end of each verse to show the repeating pattern each time rather than only at the end. This is a perfect time to discuss different animals on a farm.

Materials

- ☐ *There Was a Coyote Who Swallowed a Flea*
- ☐ *There Was An Old Lady Who Swallowed a Trout*
- ☐ *There Was An Old Lady Who Swallowed the Sea*
- ☐ *Old MacDonald*

June

1. To get the students ready for summer, an amusing, culminating book to read is *There Was An Old Lady Who Swallowed a Shell*. This one has her swallowing things found on a beach necessary for building a sand castle. This can also be used to make a final class book with groups of students illustrating each page (*There Was an Old Lady Who Swallowed a Shell Book Page*).

Materials

- ☐ *There Was An Old Lady Who Swallowed a Shell*
- ☐ *There Was An Old Lady Who Swallowed a Shell Book Page*
- ☐ Crayons

Assessment Suggestions

- Collect student samples to see if students have understood growing patterns.
- When the students show that they understand growing patterns, have them create a growing pattern using different types of manipulatives.

Curriculum Extensions/Adaptations/Integration

- Any of these stories can easily be acted out using simple props, puppets, masks/costumes, etc.
- When talking about *I Know a Shy Fellow Who Swallowed a Cello*, you can also share the music for *Peter and the Wolf*, by Tchaikovsky, or *Carnival of the Animals*, by Camille Saint-Saëns and demonstrate how each animal/character is represented by a different instrument and sound.

Family Connections

- When reading *There Was an Ol' Cajun*, send home a letter to your students' parents, asking for information about their country of origin, and whether this heritage is recent in their family history or many generations back. Use this information to write a variety of stories using words or animals/creatures from that area/country of the world. Send home a copy of the story that they can have as a keepsake.

Additional Resources

Books

There Was an Old Lady Who Swallowed a Fly, by Simms Taback; ISBN: 0670869392

The Little Old Lady Who Was Not Afraid of Anything, by Linda Williams; ISBN: 0690045840

The Deep Blue Sea, by Audrey Wood; ISBN: 0439753821

There Was An Old Lady Who Swallowed A Bat!, by Lucille Colandro; ISBN: 0439737664

I Know an Old Lady Who Swallowed a Pie, by Alison Jackson; ISBN: 0525456457

There Was an Old Lady Who Swallowed a Bell, by Lucille Colandro; ISBN: 043986643X

The Twelve Days of Christmas, by Dorothee Duntze; ISBN: 1558581510

The 12 days of Christmas, by Linnea Asplind Riley; ISBN: 0689802757

Hilary Knight's The twelve days of Christmas, by Hilary Knight; ISBN: 0689835477

The twelve days of Christmas, by Vladimir Vagin; ISBN: 0060276525

There Was A Cold Lady Who Swallowed Some Snow!, by Lucille Colandro; ISBN: 0436567033

This Is the House That Was Tidy and Neat, by Teri Sloat; ISBN: 0805069216

There Was a Bold Lady Who Wanted a Star, by Charise Mericle Harper; ISBN: 0316146730

There Was An Old Lady Who Swallowed Fly Guy, by Tedd Arnold; ISBN: 0439639069

I Know a Shy Fellow Who Swallowed a Cello, by Barbara S. Garriel; ISBN: 1590780434

There Was an Ol' Cajun, by Deborah Ousley Kadair; ISBN: 1565549171

There Was an Old Lady Who Swallowed a Trout, by Teri Slowat; ISBN: 0805042946

There Was an Old Lady Who Swallowed the Sea, by Pam Adams; ISBN: 1846430739

There Was a Coyote Who Swallowed a Flea, by Jennifer Ward; ISBN: 0873588983

There Was An Old Lady Who Swallowed a Shell, by Lucille Colandro; ISBN: 0439815363

Inside a Zoo in the City, by Alyssa Satin Capucilli; ISBN: 0590997157

There Was An Old Witch, by Howard W. Reeves; ISBN: 0786804386

Media

15 Christmas Favorites: Twelve Days of Christmas, Songs for Children Label; ASIN: B00009V7TU; www.amazon.com

Dr. Jean & Friends, by Jean R. Feldmen; Tampa, FL : Progressive Music, 1998; ASIN: B000F8VD3K

Dr. Jean's Totally Math CD, ASIN: B000JELRJU

There Was An Old Lady Who Swallowed a Fly, DVD ASIN: B00023TG6E

Web sites

http://www.partnersinrhyme.com/pirsounds/WEB_DESIGN_SOUNDS_WAV/INSTRUMENTS.html (musical instrument sound effects)

<http://classroomclipart.com/cgi-bin/kids/imageFolio.cgi?direct=Music> (musical instruments pictures)

http://barbaragarriel.com/cd_shyfellow1.htm (*I Know a Shy Fellow* CD)

<http://www.uen.org/dms> (The Pot that Juan Built & This Is the House that Jack Built, available from emedia on the UEN site).

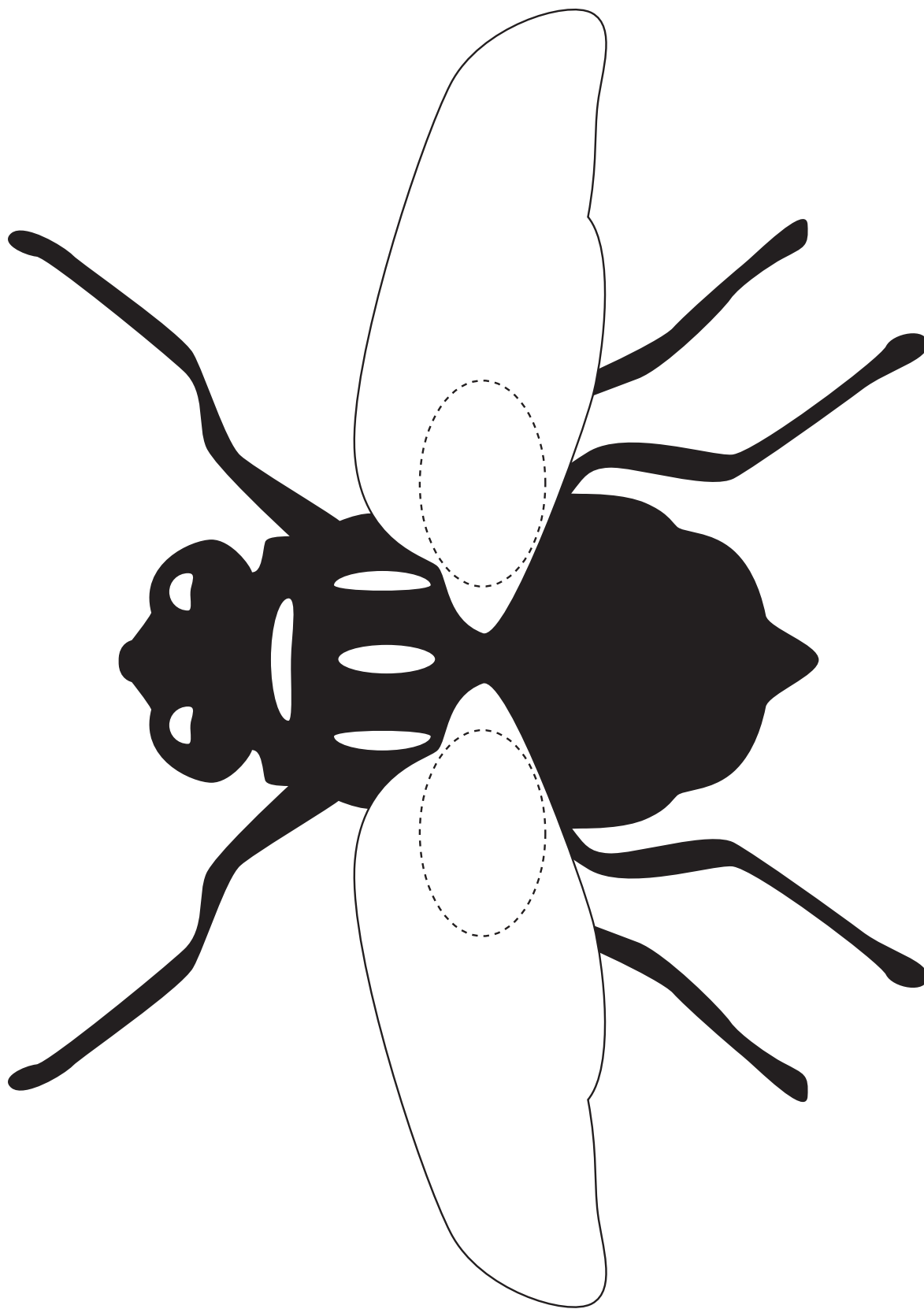
Organizations

National Counsel of Teachers of Mathematics, 1906 Association Drive, Reston, VA 20191-1502, (703) 620-9840, <http://www.nctm.org>

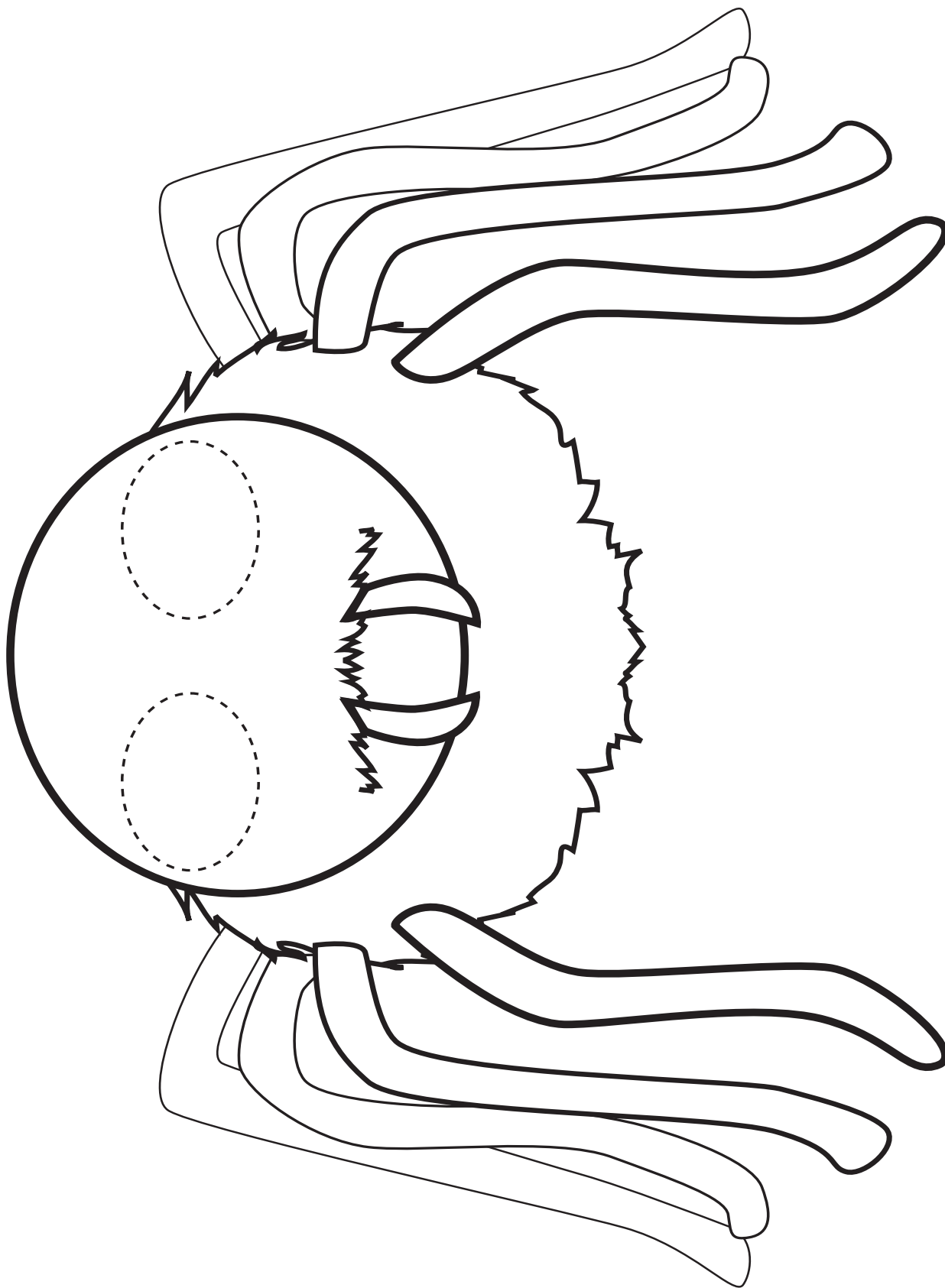
Old Lady Mask



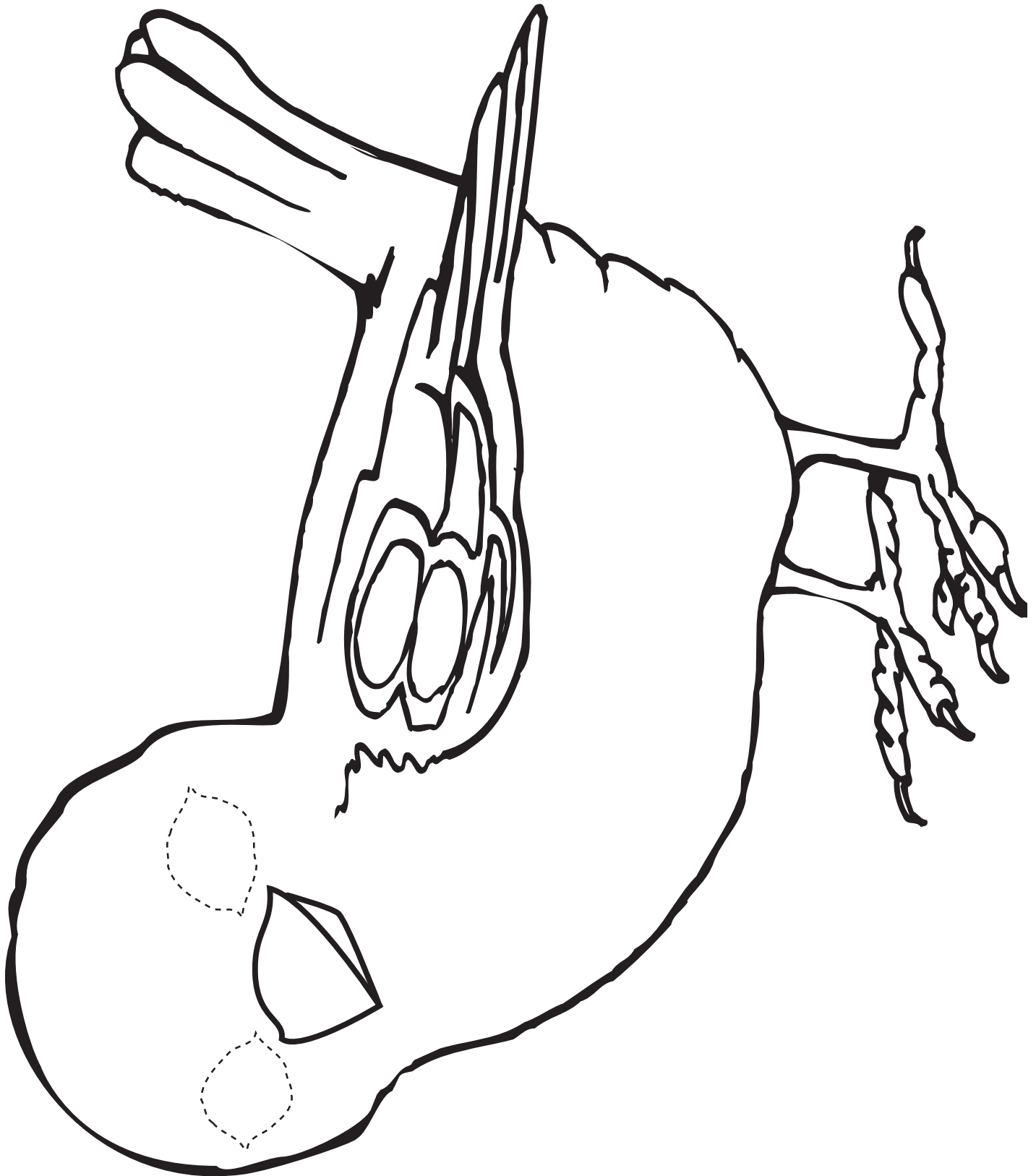
Fly Mask



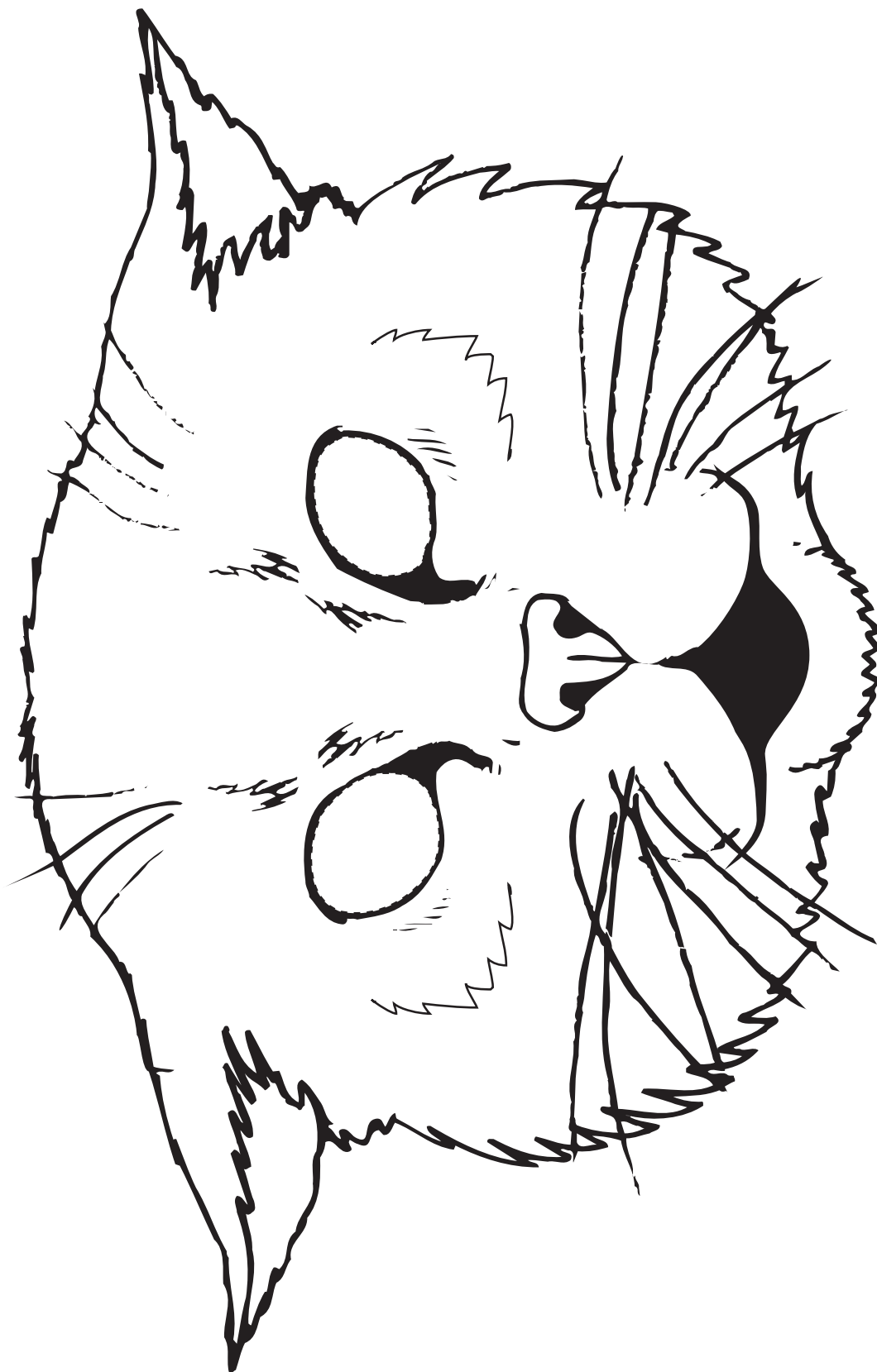
Spider Mask



Bird Mask



Cat Mask



Dog Mask



Cow Mask



Horse Mask



“Tooty Ta” Lyrics

From Dr. Jean & Friends © Dr. Jean Feldman

A tooty ta a tooty ta a tooty ta ta (with both thumbs out and in front of you with elbows slightly bent by sides and waving side to side)
A tooty ta a tooty ta a tooty ta ta
Thumbs up (put thumbs up)

A tooty ta a tooty ta a tooty ta ta
A tooty ta a tooty ta a tooty ta ta
Elbows back (thumbs up with elbows next to sides)

Continue in like manner with feet apart...knees together...bottoms up...tongue out...eyes shut...turn around (can be turning around once or continuously)...sit down.

Mother Goonie Bird Lyrics

From Dr. Jean & Friends © Dr. Jean Feldman

Mother Goonie Bird has seven chicks
And seven chicks has Mother Goonie Bird
And they couldn't swim—No!
And they couldn't fly—No!
All they did was go like this—right arm (flap right arm).

Mother Goonie Bird has seven chicks
And seven chicks has Mother Goonie Bird
And they couldn't swim—No!
And they couldn't fly—No!
All they did was go like this—left arm (flap left arm).

Continue in like manner through right foot...left foot...nod your head...turn around...sit down

Twelve Days of Christmas Class Book

On the _____ day of Christmas, my true love gave to me
_____ .

Name _____

True Love Class Book

I would give my true love _____ .

Name _____

There Was an Old Lady Who Swallowed a Shell

There was an old lady who swallowed a _____ to
help her build a sandcastle.

Illustrated by

Center Ideas for Growing

Math Standard II

Objective 2

Connections

Standard II:

Students will sort and classify objects as well as recognize and create simple patterns.

Objective 2:

Identify, duplicate, describe, and extend simple repeating and growing patterns.

Intended Learning Outcomes:

1. Demonstrate a positive learning attitude.
2. Understand and use basic concepts and skills.
3. Communicate clearly in oral, artistic, written and nonverbal forms.

Content Connections:

Language Arts VII-2; Comprehension strategies
Language Arts VIII-1; Write in different forms and genres
Content Core I-3; Acting out stories

Background Information

This activity includes five center ideas that incorporate growing patterns. Each center is based around a book, so it would be best to read the book with the class at least one time before having them participate in the center.

Each center will have the students re-creating the pattern from the book in different ways, including arranging pre-drawn manipulatives, creating their own growing pattern, making the pages in a book to match the story, building a structure step-by-step and recording it in a journal, and acting out the story using puppets.

Research Basis

Burns, M. (1992). *About teaching mathematics: a K-8 resource*. Math Solutions Publications, Sausalito, CA, 28.

“The more experience that a child has with physical objects in the environment, the more likely that related understanding will be developed. A child can obtain physical knowledge...directly from perceiving the objects themselves. The child derives logical knowledge not from the objects themselves but from manipulating them and internally processing these experiences.... First-hand experimentation is needed. Children need experience with objects before abstractions in mathematics are introduced.

The more opportunities children have to interact with peers, parents, teachers, the more viewpoints they will hear. Social interaction stimulates children to think through their viewpoints and

to approach objectivity. They achieve perspective on their own ideas when confronted with others' thoughts."

Sutton, J., and Krueger, A. (2002). What instructional strategies make mathematics teaching more learner-centered? *EdThoughts: What we know about mathematics teaching and learning*. 21.

Centers are essential to learning in kindergarten. As stated here, it is imperative that mathematical knowledge be based on prior-learning and what better way than to teach/introduce a concept and then re-enforce it through having the students participate in learning, based on books they have already been exposed to and explored as a whole group.

"Students learn by connecting new ideas to prior knowledge. Effective, student-centered instruction combines guided questioning with a set of experiences and lessons chosen to build upon the experiences and level of understanding that students already have.... Students will use a variety of tools, including manipulatives, calculators, and computers, to explore mathematics concepts and make sense of them individually and as a group of learners."

Invitation to Learn

Have the students stand with you to sing and dance to some of the songs that are based on a growing pattern. Ask for three volunteers for each song.

Sing *My Aunt Came Back* from *Best of Wee Sing* by Pamela Conn Beall and Susan Hagen Nipp, and *Mother Goose Bird*, by Dr. Jean on *Dr. Jean & Friends*. After you sing, I will need three additional volunteers for each song to come up and do the whole sequence in order to review each element of the repeating pattern.

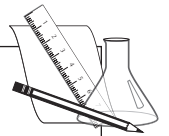
Instructional Procedures

Center #1—Rooster's Off to See the World

1. Using the *Rooster's Animals*, make a center set (either copy on white, color, and mount on different colors of paper or copy on different colors of paper). Cutout and laminate all the animals that correspond to the story.
2. Students will use the cards to re-create the story by putting them in the correct order and with the correct number of each animal.
3. In addition, you can make an outline of the final product that the students just have to fill in with the manipulative pictures.

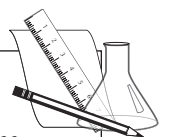
Materials

- ☐ CD player
- ☐ Best of Wee Sing CD
- ☐ Dr. Jean & Friends CD



Materials

- ☐ Rooster's Off to See The World
- ☐ Rooster's Animals
- ☐ Scissors
- ☐ Colored paper
- ☐ Glue



Materials

- ☐ *This Is The House That Jack Built*
- ☐ *Jack's Character Puppets*
- ☐ Scissors
- ☐ Tongue depressors
- ☐ Puppet stage



Center #2—This Is the House That Jack Built

1. Using *Jack's Character Puppets*, make a puppet of each of the characters, mounted on tongue depressors.
2. One student will be the narrator to tell the story while the other students act it out.
3. The “actors” will choose one or two character puppets depending on how many students are in each group, to use to act out the story.
4. The narrator will then “read” the story by looking at the pictures and telling the story in his/her own words as the other students use the puppets to act it out.

Materials

- ☐ *Jack The Builder*
- ☐ *Building Box*
- ☐ Building blocks
- ☐ Crayon



Center #3—Jack the Builder

This story is not necessarily a repeating pattern, but as the students re-create it in their own way, it becomes one. It would also be most beneficial to have an adult supervise the center (you, an aide, or a parent volunteer).

1. Put a container of building blocks, the *Building Box*, and crayons, at the center.
2. The students will pick three blocks and make something. Then they will color the first box to match what they have created with their blocks.
3. Then they will add *one or two* more blocks to what they made before.
4. They will then draw the new creation in the next box, including what they had before and the new blocks they added.
5. They will continue in like manner until all boxes are full.

Materials

- ☐ *House Booklet*
- ☐ Crayons



Center #4—The Napping House

This one may take more than one day to finish! You will also want an adult to supervise this center, as writing and complex repetition required.

1. Using the *House Booklet*, make a 6-8 page booklet that the students can use to make-up their own story of what they would find in a napping/waking/party/sad/etc. house.
2. Then have them create their own version of the story, drawing/ coloring the pictures to match in the outline of the house, making sure that they include each element of their pattern each time.

Center #5—The Deep Blue Sea

1. Give the students a bucket of pattern blocks, paper cutouts of the pattern blocks (available in the back of *Investigations: Pattern Trains and Hopscotch Paths* book or die-cuts), and their journals.
2. Have them create a “blue sea” with the diamonds.
3. Then they need to create an “island” on the sea with the tan rhombuses.
4. Next, they need to use one shape/color at a time to create a scene on that island.
5. Finally, they will use the cutouts to copy/glue their final scene into their journal.

Materials

- ☐ *The Deep Blue Sea*
- ☐ *Investigations: Pattern Trains and Hopscotch Paths*
- ☐ Pattern blocks
- ☐ Cut-outs of patterns blocks
- ☐ Glue or glue sticks
- ☐ Student journals

Center #6—Mr. Noisy’s Book of Patterns

1. Use *Patterns and Shapes* for 1-2 days/weeks
2. Have the students color the patterns correctly following the growing pattern sequence.
3. The students will then copy one of the growing patterns from the paper into their journal.
4. Use *Fill in Patterns and Shapes* for 1-2 days/weeks.
5. Check for students’ comprehension as they are now extending their thinking!

Materials

- ☐ *Mr. Noisy’s Book of Patterns*
- ☐ *Patterns and Shapes*
- ☐ *Fill in Patterns and Shapes*
- ☐ Crayons
- ☐ Student journals

Assessment Suggestions

- Have the students do a self-check on *Rooster’s Off to See the World* to see if they have the correct number of each animal and in the correct order. It is self-checking, especially as you explain the “stair-casing” of the final product. If you have the book, you can photocopy the page with all the animals on it as a way for the students to check their own work.
- Students must turn in their paper from *Mr. Noisy’s Book of Patterns* for you to check. Return to the students with marks next to the ones that are incorrect, but do not tell them what is wrong—see if they can figure out their mistakes on their own.
- Ask developmental/scaffolding questions as students are creating their patterns.

Curriculum Extensions/Adaptations/Integration

- Make a class book of the pages that the students made in the *Jack the Builder* center. You can also have the students 1) take a picture of what they build with a digital camera, 2) print out the picture, 3) glue it on the top of a page and 4) have them draw it again on the bottom. You could also make a book of the pictures of their creations and put it in a center that students can then try to re-create.
- Have the students act-out *This is the House That Jack Built* in a performance for another class or parents, including full-dress costumes or masks that the children have drawn for each character.
- Do a whole-class shared writing activity to come up with a new version of *The Napping House* and then make a class book with the students illustrating each page.
- Laminate the blackline from *Mr. Noisy's Book of Patterns*, and put in a center and have the students copy the patterns using pattern blocks, beads, buttons, etc.

Family Connections

- Encourage your students to go through their books at home and see if they have any stories that contain growing patterns. Have them bring in the books and explain the growing pattern. If possible, have a parent come in and read the book to the class.
- Include making a growing pattern at a Parent Math Night as an activity/skill for the students to teach the parents.
- Send home blank sheets from *Mr. Noisy's Book of Patterns* and see if the students can “teach” their parents about growing patterns. Have the students correct the parents’ “homework” and return to school to give their parents a “grade.”

Additional Resources

Books

Jack the Builder, by Stuart Murphy; ISBN: 0060557745

Mr. Noisy's Book of Patterns, by Rozanne Williams; ISBN: 0916119963

The Deep Blue Sea: A Book of Colors, by Audrey Wood; ISBN: 0439753821

This Is the House That Jack Built, by Simms Taback; ISBN: 0399234888

The Napping House, by Audrey Wood and Don Wood; ISBN: 0590975463

Investigations: Pattern Trains and Hopscotch Paths by Rebeka Eston; ISBN: 1572329270

Navigating through Algebra in Pre-Kindergarten-Grade 2, by Carole Greenes, Mary Cavanagh, Linda Dacey, Carol Findell and Marian Small; ISBN: 8973534999

About Teaching Mathematics: A K-8 Resource by Marilyn Burns; ISBN: 0941355055

Media

Best of Wee Sing, by Pamela Conn Beall and Susan Hagen N., from Scholastic.

Dr. Jean & Friends, by Jean R. Feldmen; Tampa, FL: Progressive Music 1998; ASIN B000F8VD3K

Web sites

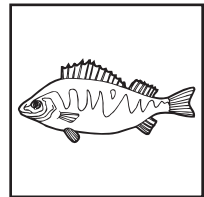
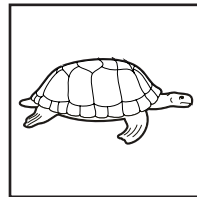
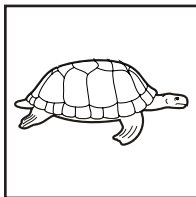
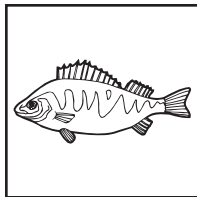
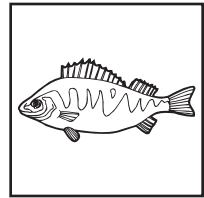
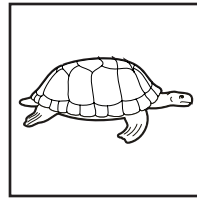
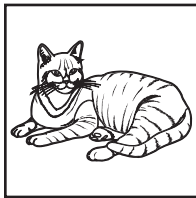
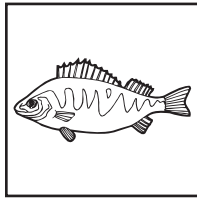
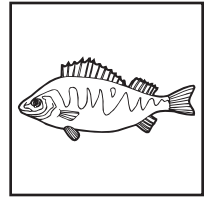
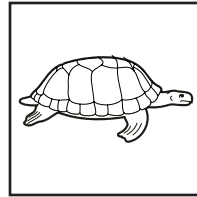
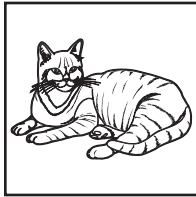
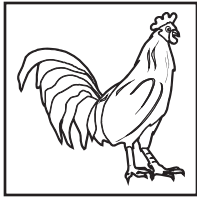
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<http://mathcentral.uregina.ca>

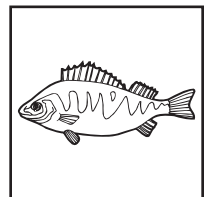
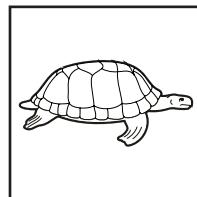
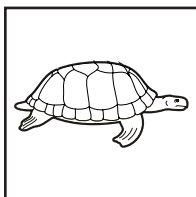
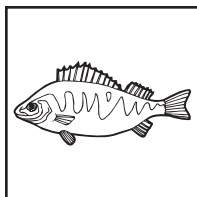
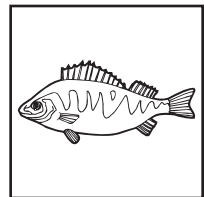
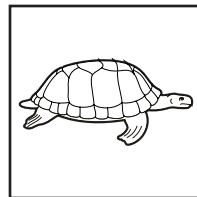
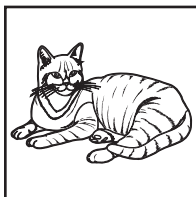
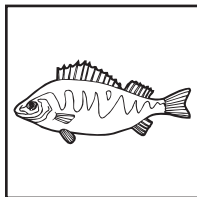
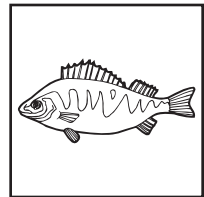
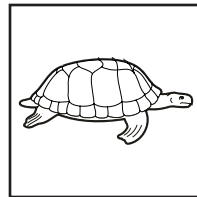
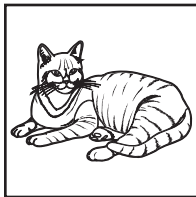
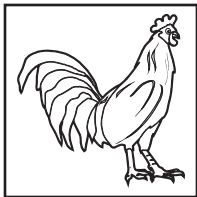
Organizations

National Counsel of Teachers of Mathematics, 1906 Association Drive, Reston, VA 20191-1502, (703) 620-9840, <http://www.nctm.org>

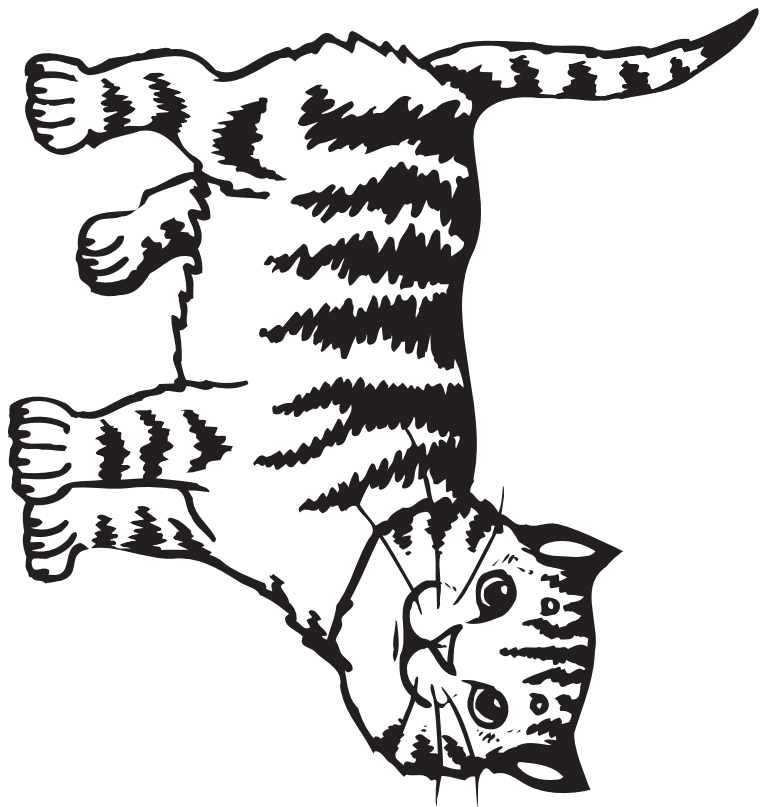
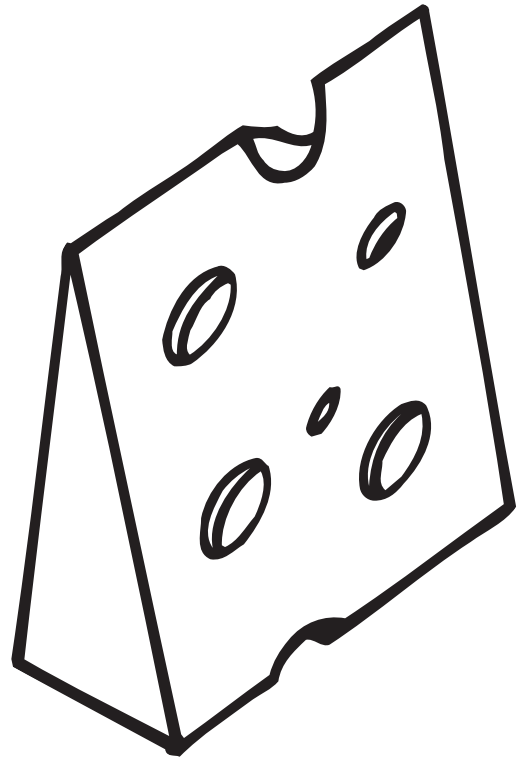
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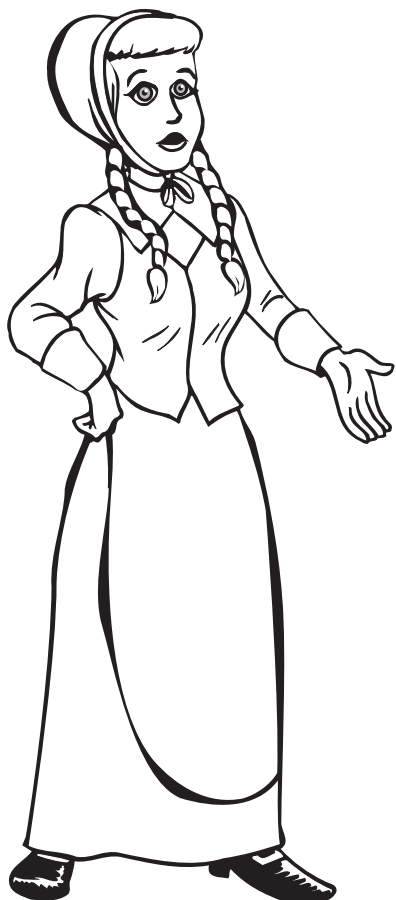
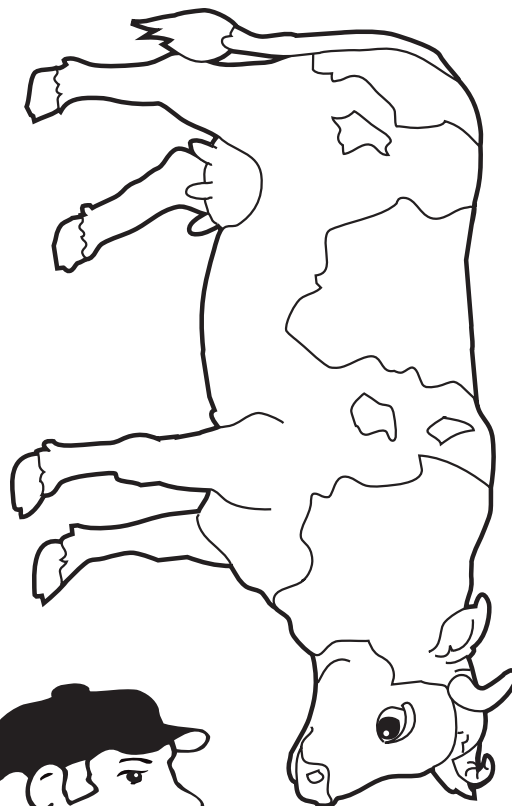
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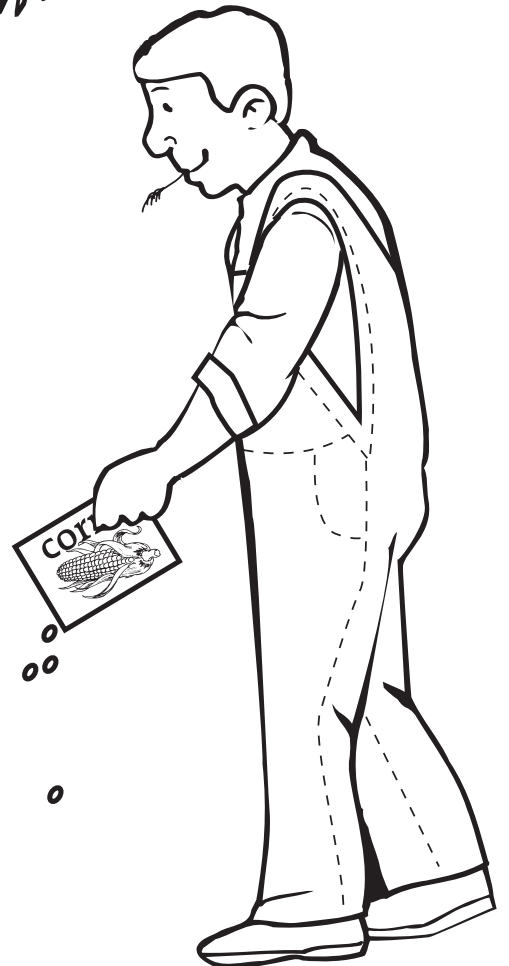
Jack's Character Puppets



Jack's Character Puppets



Jack's Character Puppets



Name _____

Building Box

House Booklet

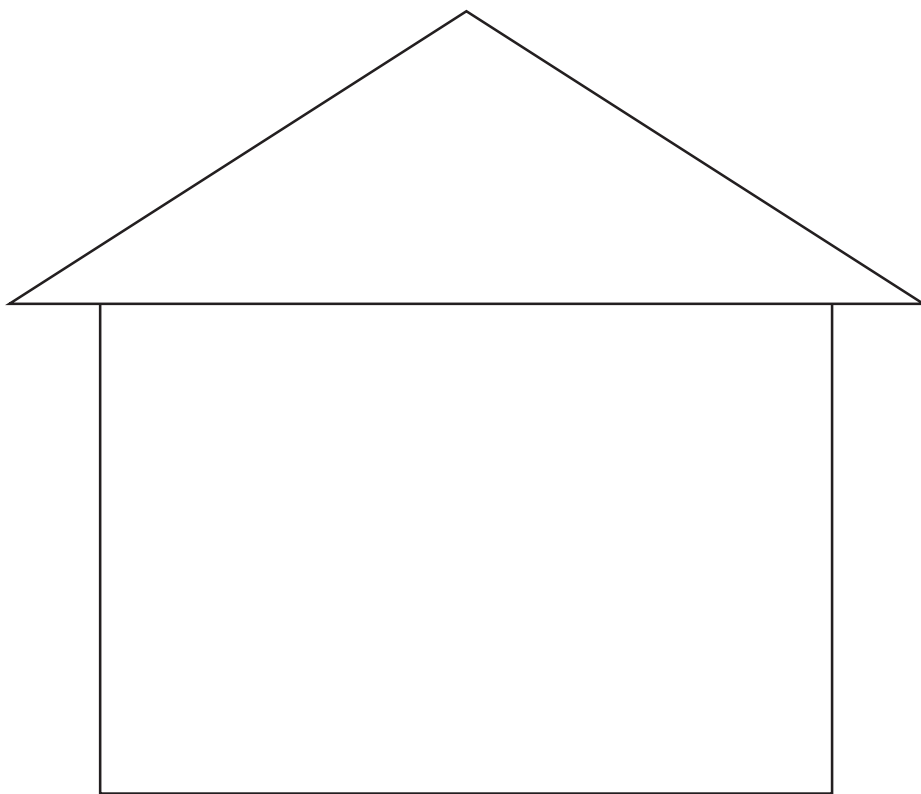
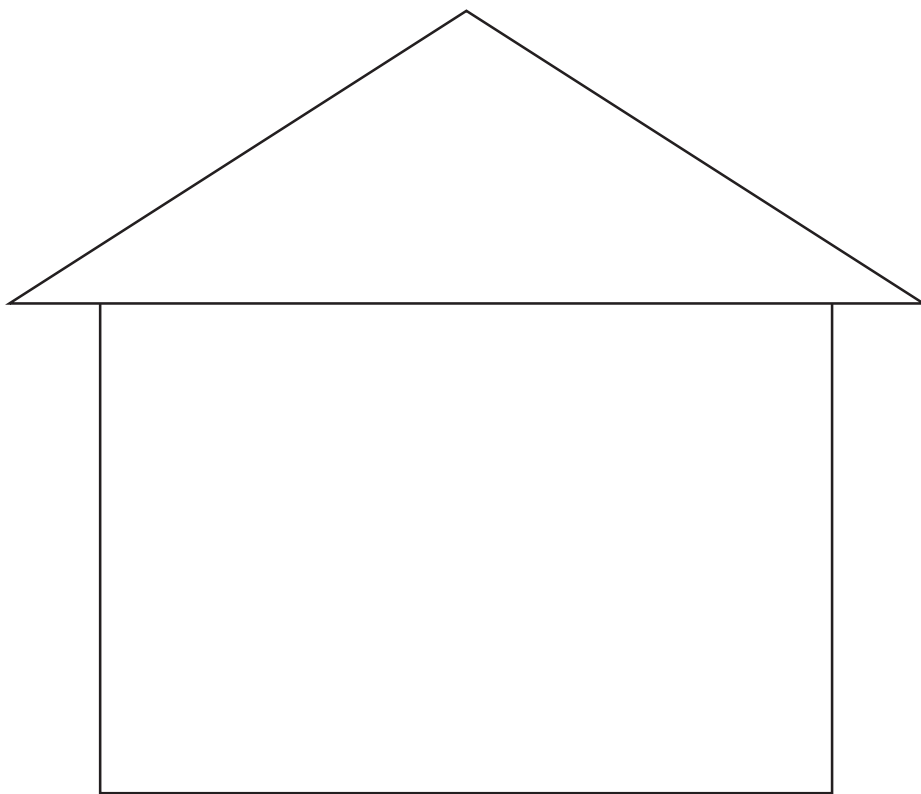
The _____ House

By _____

The _____ House

By _____

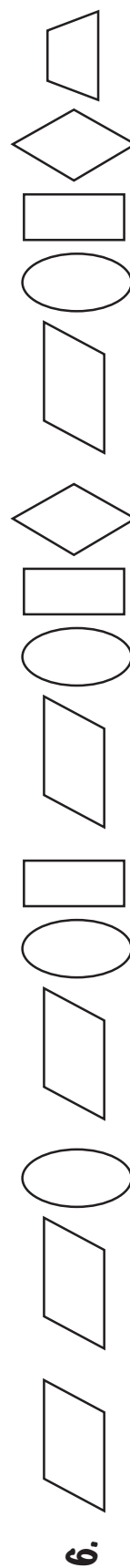
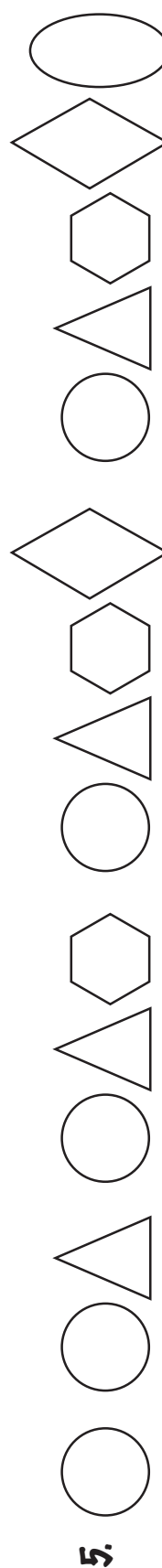
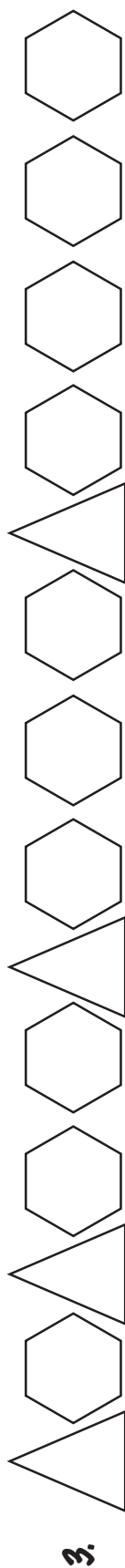
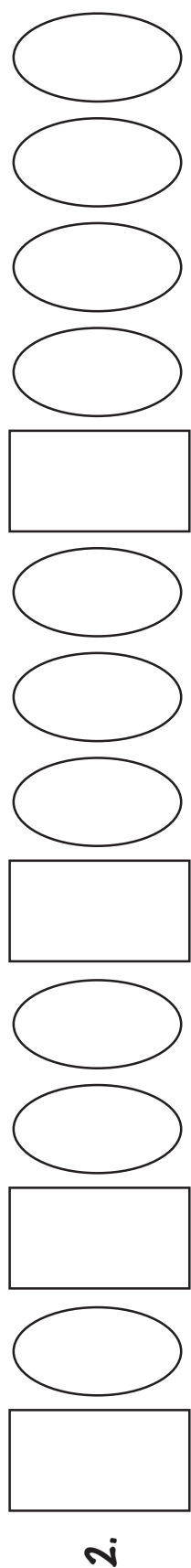
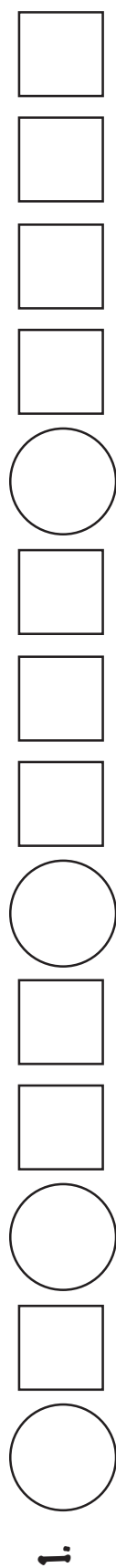
House Booklet



Name _____

Patterns and Shapes

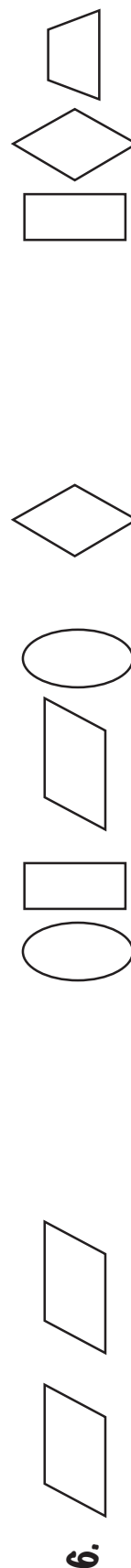
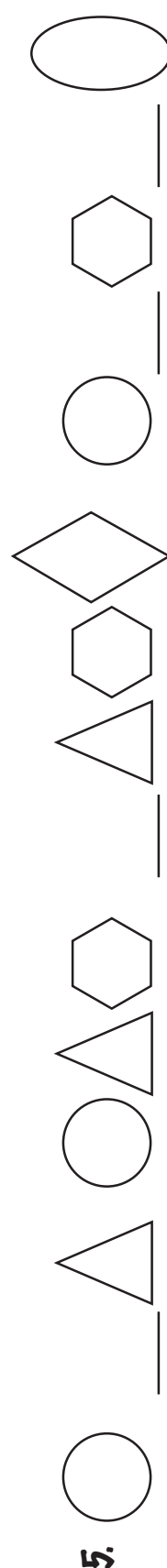
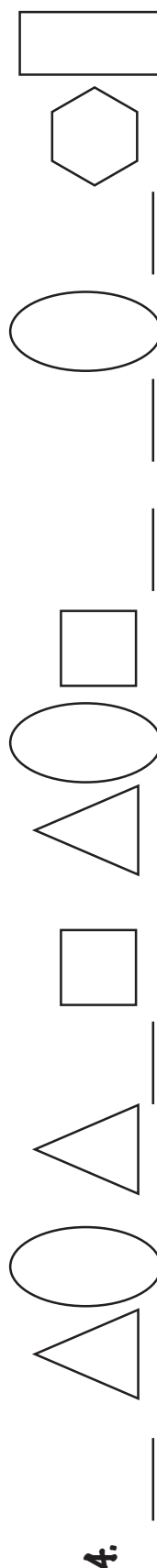
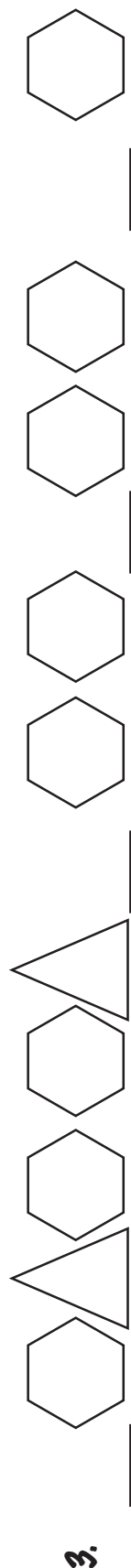
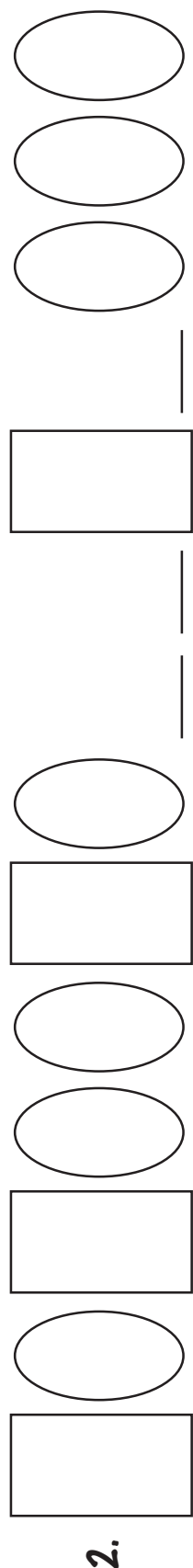
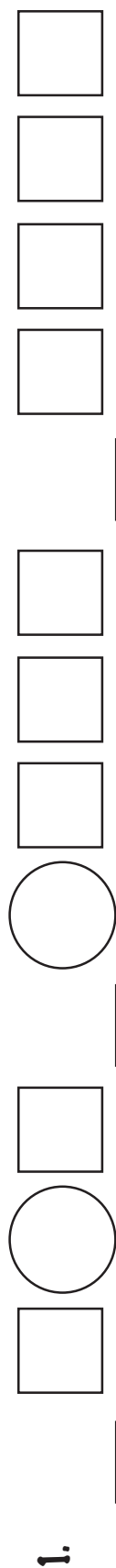
Color each shape a different color to complete the growing pattern.



Name _____

Fill In Patterns and Shapes

Fill in the blanks to complete the growing patterns. Then color the shapes according to the patterns.



Content III-2

Activities

Environment & Animals

Camp Paws and Claws: Pets

Standard III:

Students will develop an understanding of their environment.

Objective 2:

Observe and describe animals in the local environment.

Intended Learning Outcomes:

1. Observe, describe, draw, and compare familiar animals.
2. Describe how young animals are different from adult animals.
3. Observe and imitate the sounds and movements of animals with songs, dances, and storytelling.
4. Distinguish between real and make-believe animal behaviors.

Content Connections:

Math II-1; Sort and classify objects
 Math III-3; Collect and organize data
 Language Arts; I, II, IV-VIII

*Content
Standard
III*

*Objective
2*

Connections

Background Information

Camp Paws and Claws is a three day activity that reinforces what students have learned throughout the year about animals. For each activity, a different group of animals is studied. These activities focus on pets: cats, dogs, birds, and fish. Students will re-read both fiction and non-fiction stories that have been previously introduced during the school year. As they read the books, they will have activities to complete in order to earn their “badge” for that animal. Each student will make a paper bag vest on which they will be able to display badges they have earned.

Camp can also have many extra activities added that will create a more camp like environment, or it can be just part of the school day. One activity is a daily camp message that either the teacher or students compose on paper that looks like a tree or log. Another fun activity is to make a camp stew that is a variety of favorite breakfast cereals in a large pot over a pretend fire. Teachers can also set up a tent in their classroom for a fun reading area.

In order for your students to be successful for these activities of Camp Paws and Claws, you should instruct them on the following items. They should understand realistic and unrealistic behaviors of pets, understand the process of how an egg hatches, identify parts of animals, and understand that some animals are make believe characters, and some are real animals.

Several of the books selected should be ones most of the children are familiar with already, and ones that might already be in your

library. I selected them so that it would be easy to teach Camp Paws and Claws, and to hopefully eliminate having to buy several books.

One item the students will make is a Science Journal. The science journal can be made with either plain white paper or with lined paper. Take cardboard or cardstock and punch holes in it. Tie the journal together with jute or yarn to make it appear rustic. At anytime during camp you can have the students pull out their journals and respond to a question or a picture you show them. Depending on the ability level of the students, you may choose to allow them to respond with pictures, words, or sentences.

Research Basis

Joshua, M. (2007). The effects of pictures and prompts on the writing of students in primary grades: Action Research by Graduate Students at California State University, Northridge. *Action in Teacher Education*. 29(2) 80-93.

Picture aided writing and drawing are more effective in primary grades than prompts alone. However, picture aides can hinder student creativity and therefore should be paired with student ability and background knowledge.

Michael, J. (2006). Where's the evidence that active learning works? *Advances in Physiology Education*. 30. 159-167.

This research article states the effectiveness of student-centered active learning. Research has proved the effectiveness and improvement of learning in active and passive styles of teaching. Learning should match the needs and personalities of the students.

Invitation to Learn

Favorite Pet Graph

The choices on the graph should be cat, dog, fish, and bird. To allow the activity to be completed by all children the graph should have a picture and the word of each animal. Give each child a small yellow post-it note. Allow the class a few minutes to write their name on the note and have them put their name under which pet animal is their favorite.

Instructional Procedures

Group students into four small groups or complete activities as a class. Each animal will have a tub with all materials necessary to complete the activities to earn the badge. Explain all activities to

children prior to allowing them to go to the centers. In each tub keep an example so that students know what to do.

Cats

1. Have the students read the book, *The Cat in the Hat*. Have each group member share his/her favorite part of the story. Orally discuss if a real cat could do what the cat did in the book.
2. In, *Animal Babies*, read the section on kittens. Have students identify the various parts of the cat verbally with another group member. In their science journal have the students draw a mother and baby cat and talk about how they are the same and different with a friend.
3. Make their own Cat book. Have each child make a book about cats. They will need a piece of construction paper and a copy of all the pages to the book. The book will have the children fill in high frequency sight words. When they finish have them read the book to themselves once. The book will also include a pointer, which is a craft stick with a pom-poms to create a paw. The students can use this pointer when reading the words to the story. The pointer is stored in a pocket on the back cover of the book. To make the pocket, cut a 3x5 index card in half and staple it on three of the sides to the back cover, then slide the pointer in.
4. When they are finished, they may cut out and color the cat badge and glue it to their vest.

Dogs

1. Have the students read the book *Go, Dog, Go!*
2. As a group retell the events of *Go, Dog, Go!* Perform by role playing for an adult in the classroom or to other group members. The children may refer to the book while acting it out.
3. Sort cards of pictures of character animals and real life animals. For example: A picture of the Cat from *Cat in the Hat* and a picture of a real life cat.
4. Animal Dancer Movement. Each child will be given a ribbon dancer, which is a dowel rod with a 2-3 foot ribbon attached to the end. In a bag, include various pictures of animals. One child will be in charge of showing the picture of the animal and

Materials

- ☐ Cat Book
- ☐ Pom-poms
- ☐ Tubs
- ☐ Drawing paper
- ☐ Crayons
- ☐ Pencils
- ☐ Craft stick
- ☐ Index cards
- ☐ Animal Badges
- ☐ Paper vest
- ☐ Ribbon Dancers
- ☐ Animal Pictures
- ☐ Adult and Baby Animal Cards
- ☐ Animal Cards
- ☐ How an Egg Hatches Cards
- ☐ Paint
- ☐ Construction paper
- ☐ Black marker
- ☐ Aluminum foil
- ☐ Science Journals
- ☐ Fish



turning on the music for the children to move like the animal would.

5. When all activities are complete the children may color and cut out their dog badge.

Birds

1. Read the book, *Are You My Mother?* Discuss the mothers and babies in the story. Discuss the names of mothers and babies of animals.
2. Make an *Adult and Baby Animal matching game*. Color and cut out squares of adult and baby animals. Match the adult and the baby. Practice using the names for each, for example: cat and kitten.
3. Read, *What Is a Bird?* and *A Nest Full of Eggs*. Orally discuss the process of making a bird nest and how eggs hatch.
4. Color and sequence cards of *How an Egg Hatches*. If a student puts their egg sequence cards in a different order, have the student orally explain the steps to you.
5. Color and cut out bird badge and put on their vest.

Fish

1. Read *Rainbow Fish*. Discuss what you can share at home and school.
2. Create A Fish activity. Students will have the palm of their hand painted in stripes of red, yellow, blue, green and white. Keeping the fingers close together the students will place their hand on the blue construction paper. The palm makes the head of the fish and the fingers created the fins and tail. After the child washes their hand they will paint their fingers with green paint and put it at the bottom of the paper to create "seaweed".
3. Attach a ½" x ½" aluminum foil scale. When fish dries, add eye and mouth details with black marker.
4. Read the book, *What Is a Fish?* Optional: Observe a fish in the classroom. Record findings in science journal.
5. When finished, color and cut out fish badge.

Assessment Suggestions

- Collect and assess science journals at the end of the day.
- Observe students while they act out the story, *Go, Dog, Go!*- add it will be assessed during activity
- Grade *How An Egg Hatches* activity.
- Allow the children to share something they learned about cats, dogs, fish, or birds to the class.
- Do a pre-assessment on how eggs hatch and determine what they already know.

Curriculum Extensions/Adaptations/Integration

- Have advanced students become “group leaders” and help other members remember how to do activities for badges.
- For any journaling activity, provide small post-it notes. Allow students to get assistance from you or another student on how to correctly spell the word. I tell the students to attempt to sound out the word on their own. Once they have done that I will help them correct it if needed. Some students do not want to write something incorrect. This allows them to try to spell the word on their own, but have it correctly written as well.
- Do additional activities in their science journal. Have students write real and make believe stories about their pet.

Family Connections

- Have students take their matching Adult and Baby Animal card game home and play with their parents.
- Have the parents and students discuss how animal mothers take care of their babies just like human parents take care of their babies.
- Have parents come into the classroom and share any knowledge they may have on a pet. They can also help work the centers and provide students with additional assistance.

Additional Resources

Books

The Cat in the Hat, by Dr. Seuss; ISBN 039480001X

Baby Animals, by Angela Royston; ISBN 0689715633

Go, Dog, Go! by P.D. Eastman; ISBN-10: 067988629X

ISBN-13: 978-0679886297

What Is a Fish?, by Lola M. Schaefer; ISBN 0736808655

Rainbow Fish, by Marcus Pfister; ISBN 1558580093

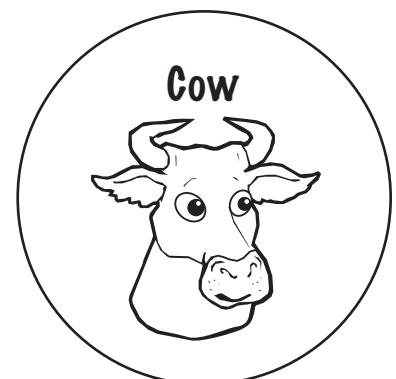
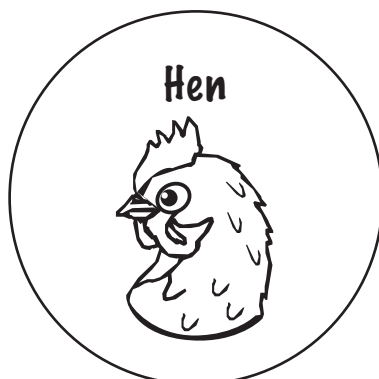
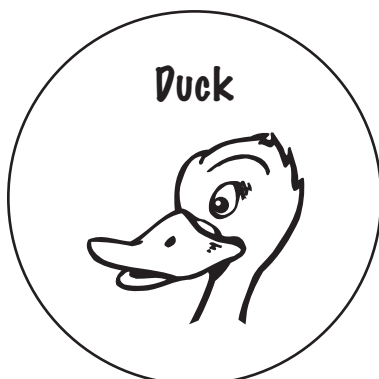
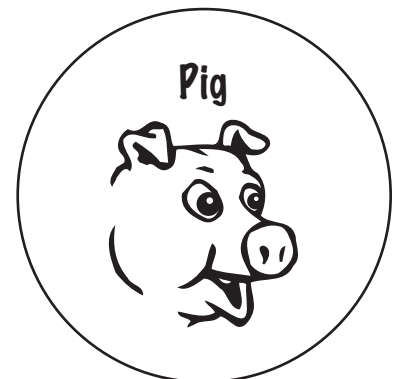
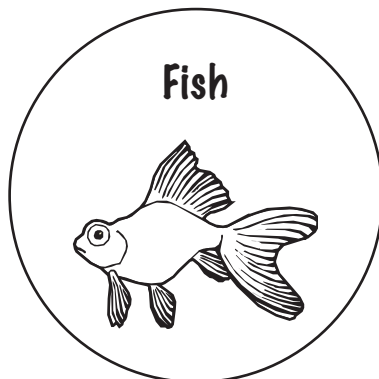
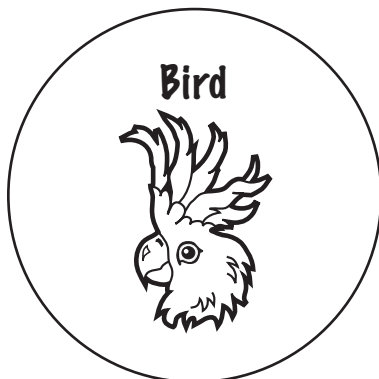
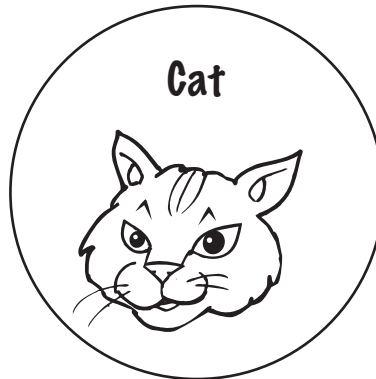
Are You My Mother?, by P.D. Eastman; ISBN-10: 0679890475

ISBN-13: 978-0679890478

What Is a Bird?, by Lola M. Schaefer; ISBN 0736808647

A Nest Full of Eggs, by Priscilla B. Jenkins; ISBN 0785761411

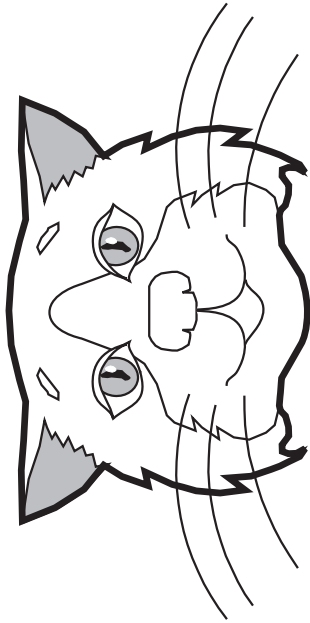
Animal Badges



My Cat Book

This book is dedicated to

By:



Cats like to

Cats have

ears.



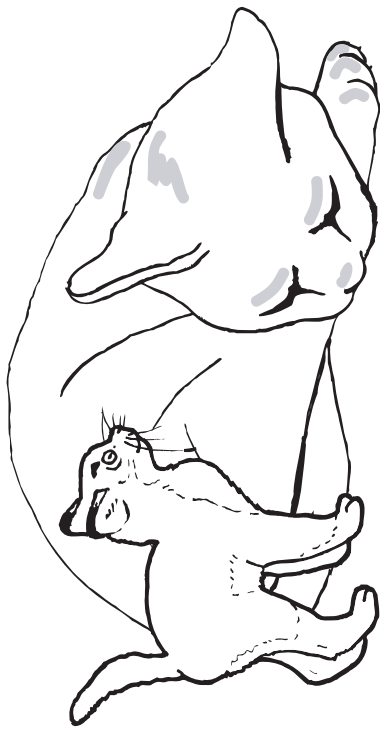
Cats have



Cats have

paws.

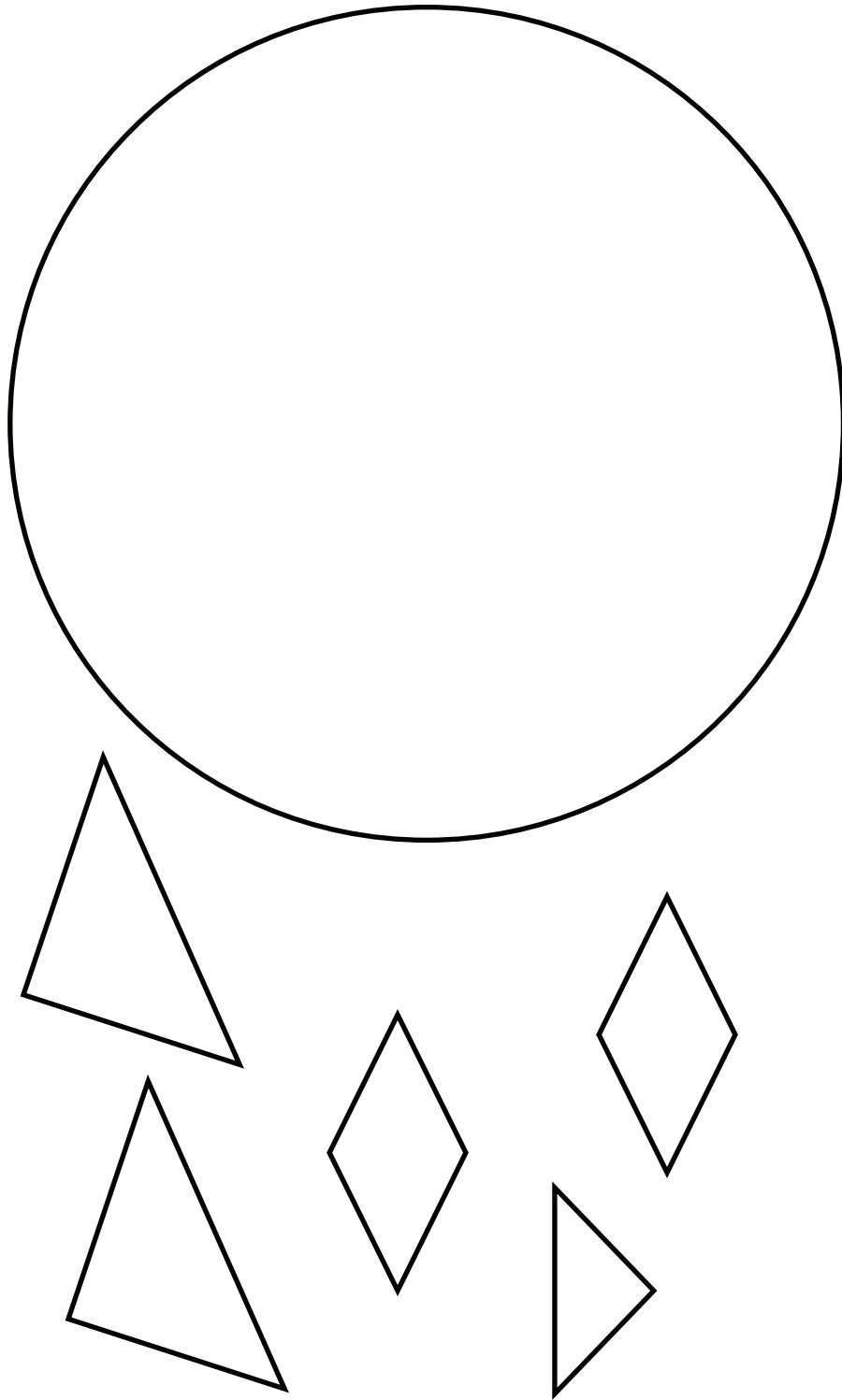
on their body.



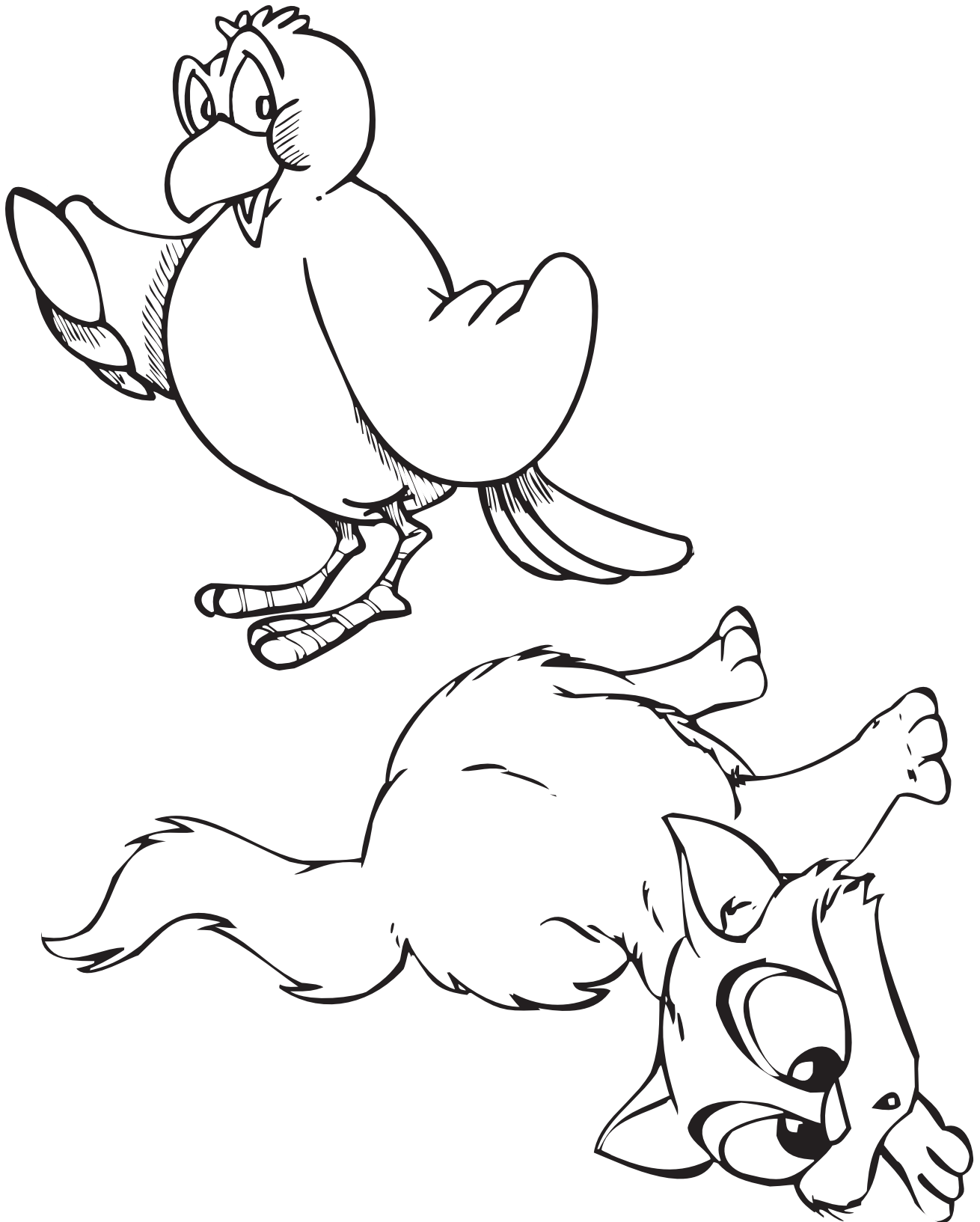
The End!

A baby cat is called a

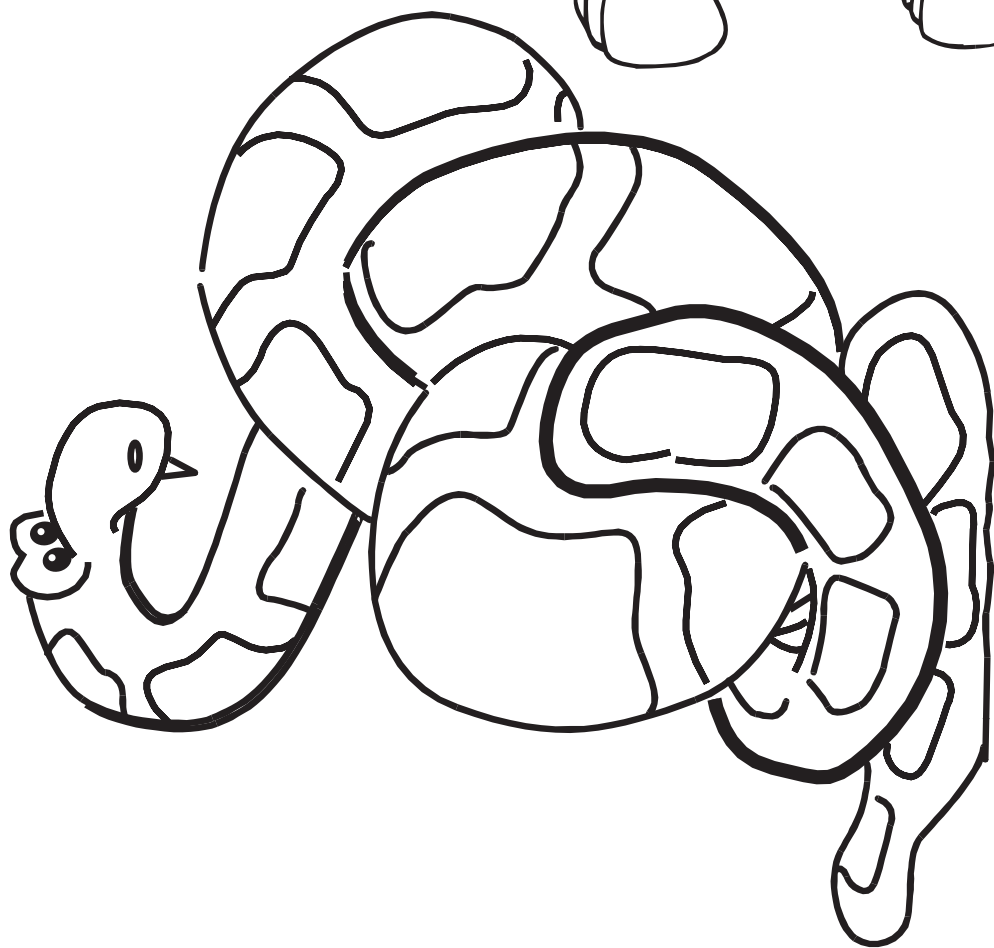
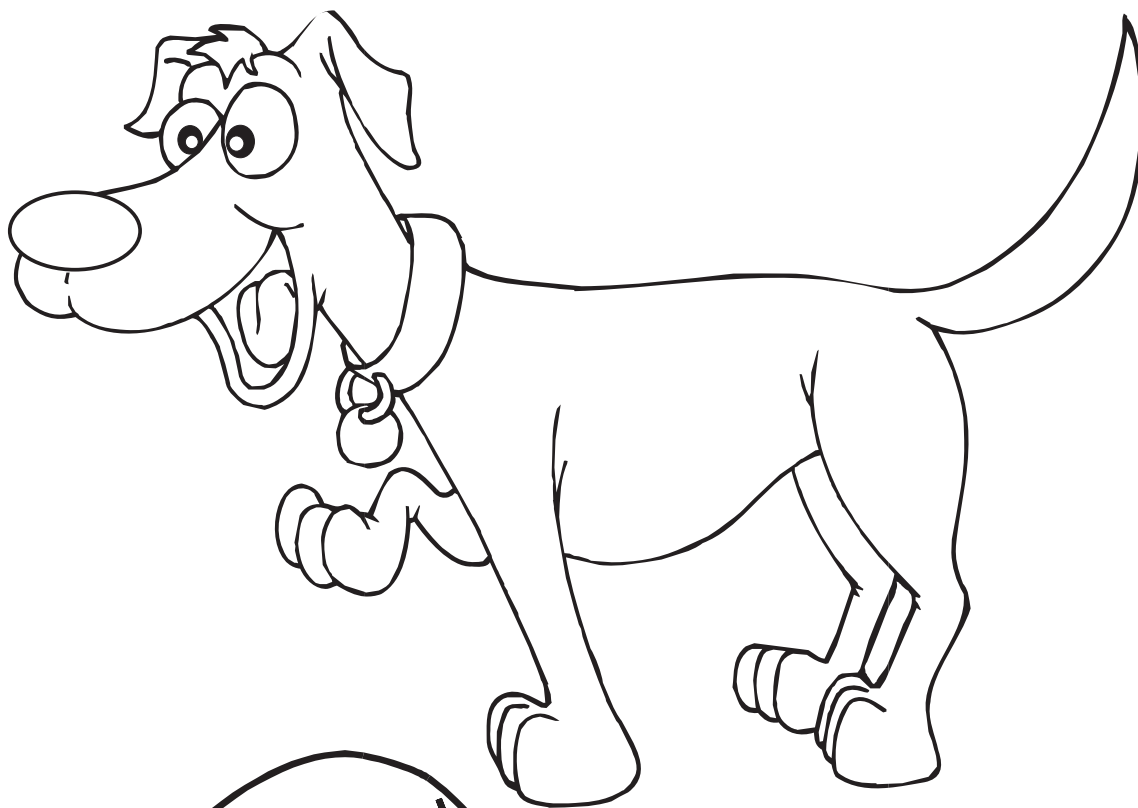
Cat Book Cover



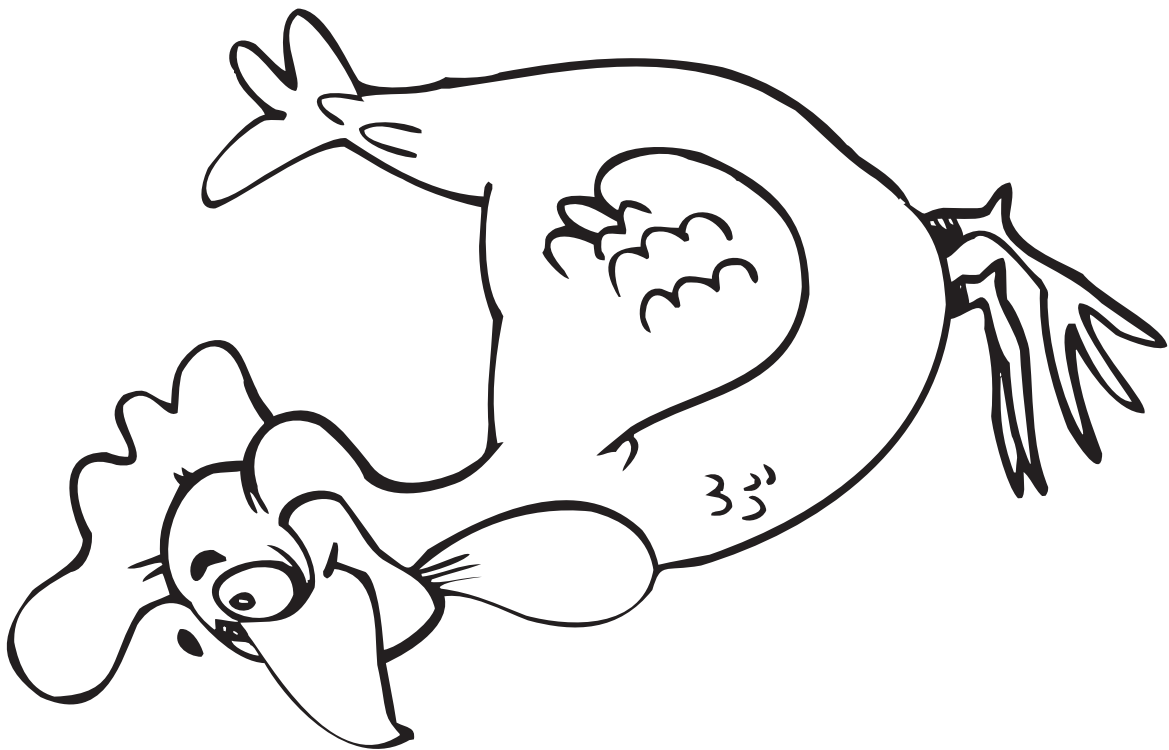
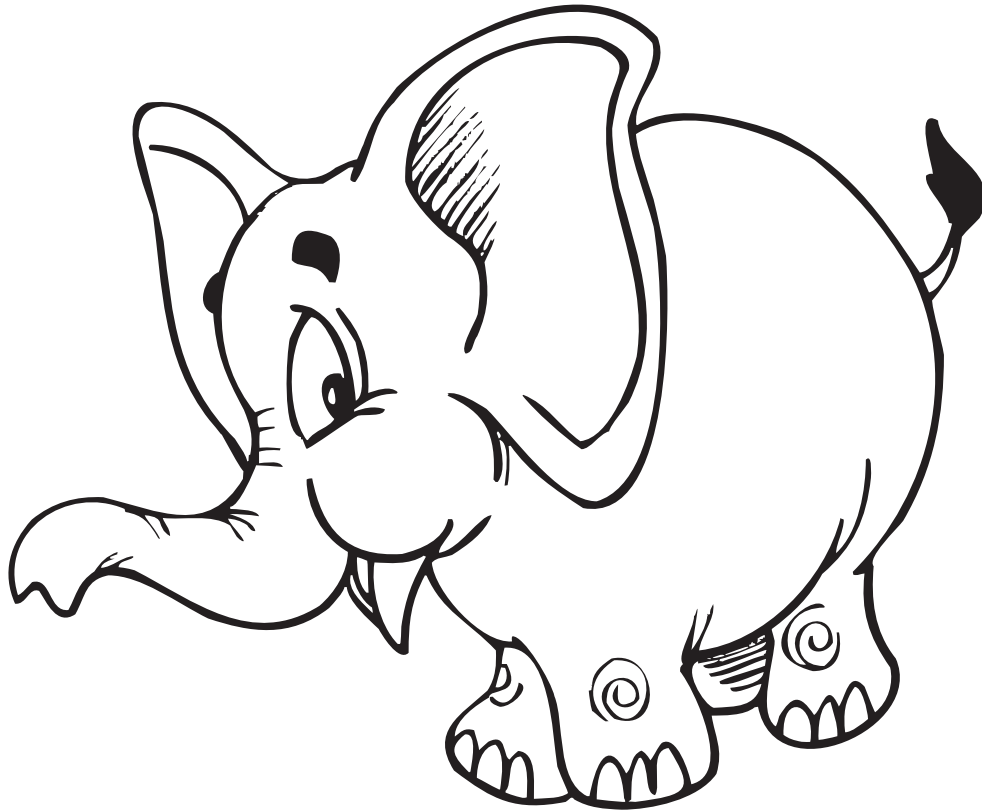
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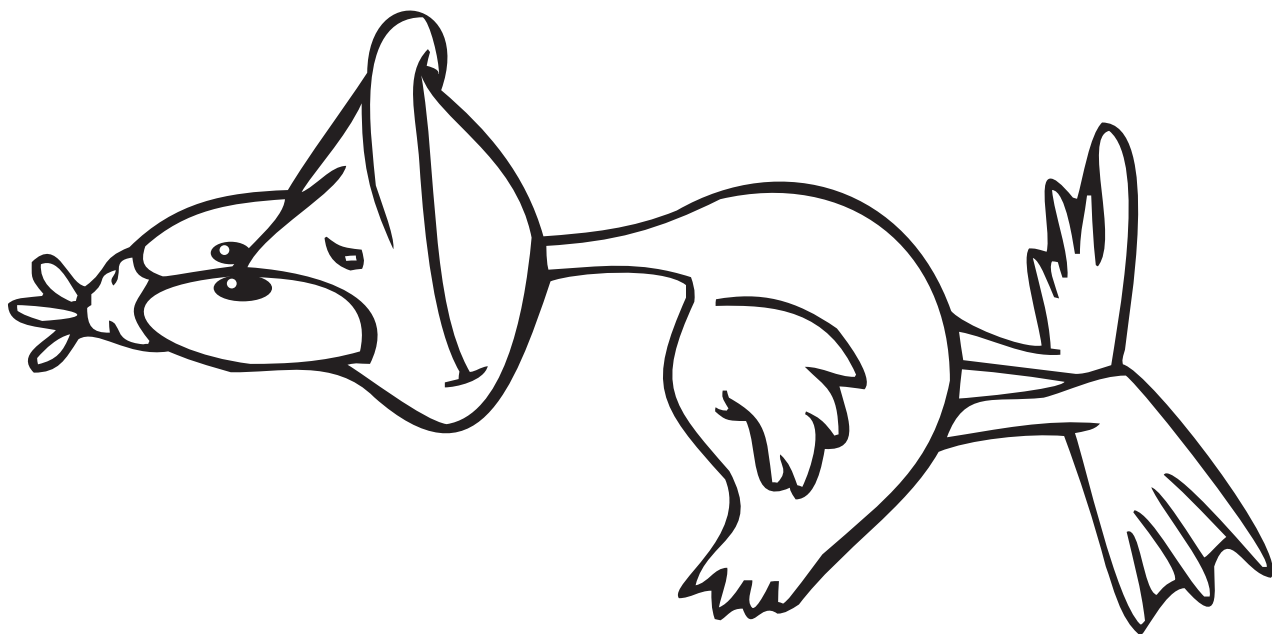
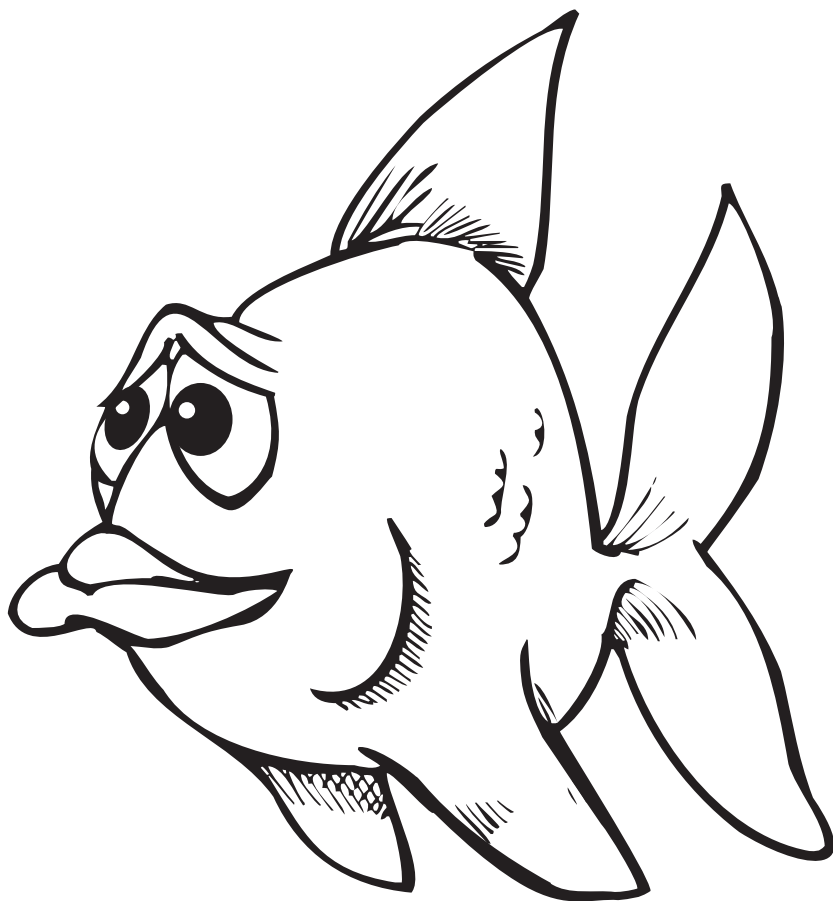
Animal Pictures



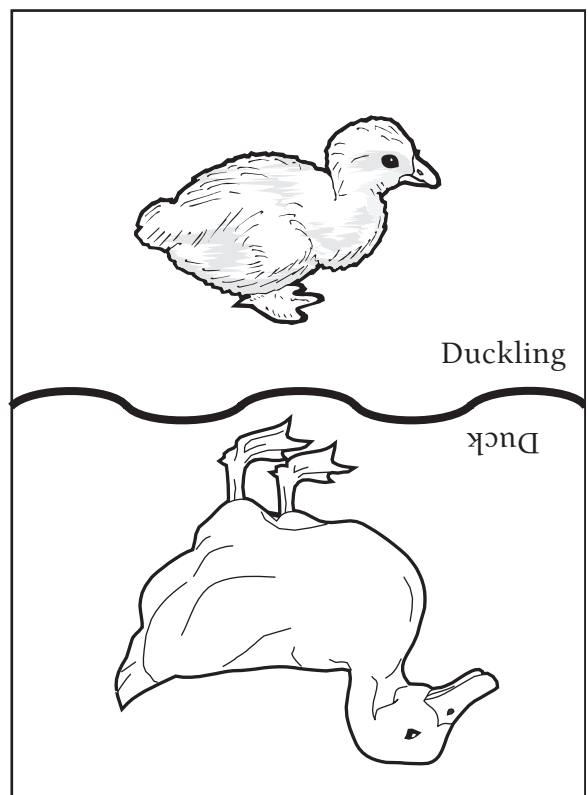
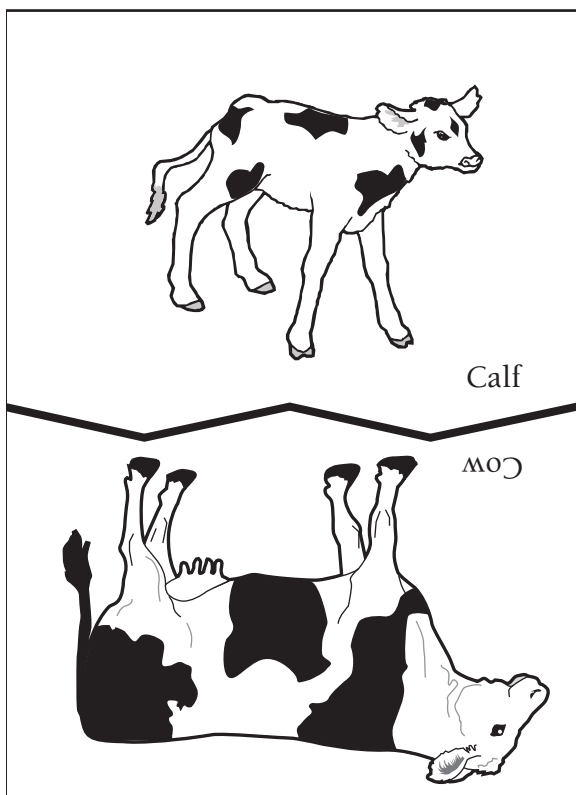
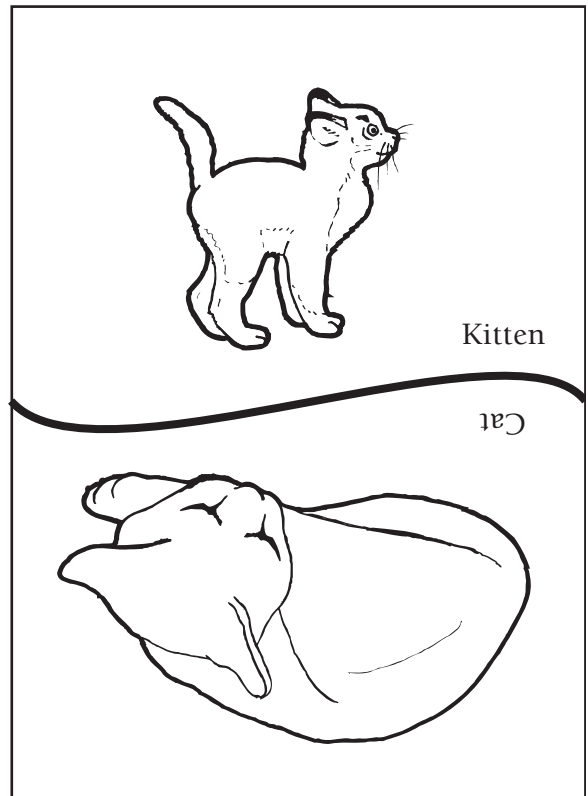
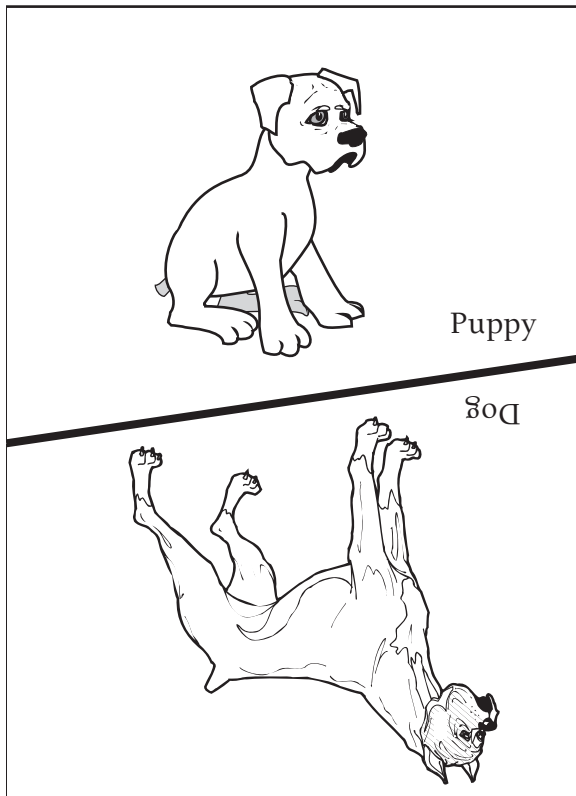
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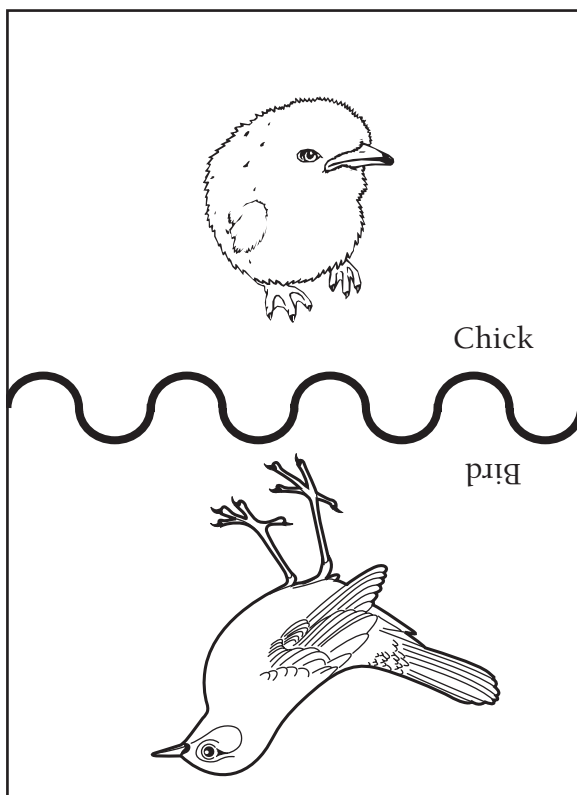
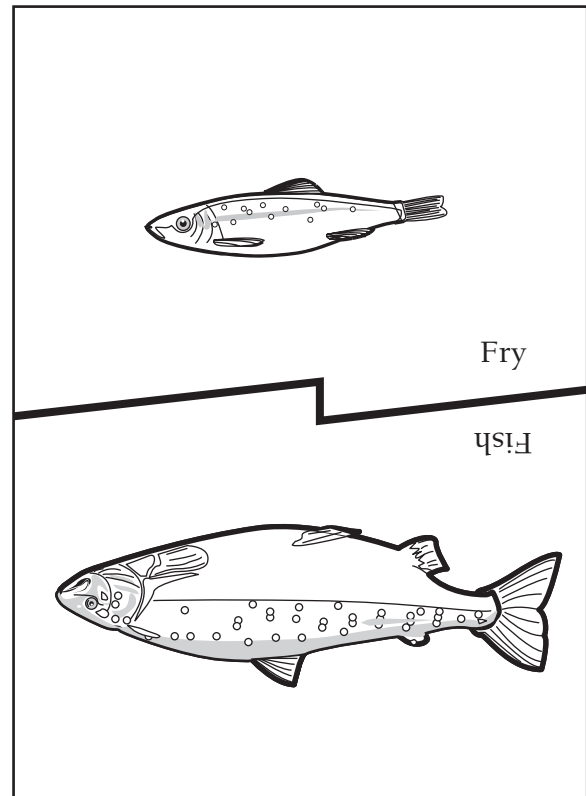
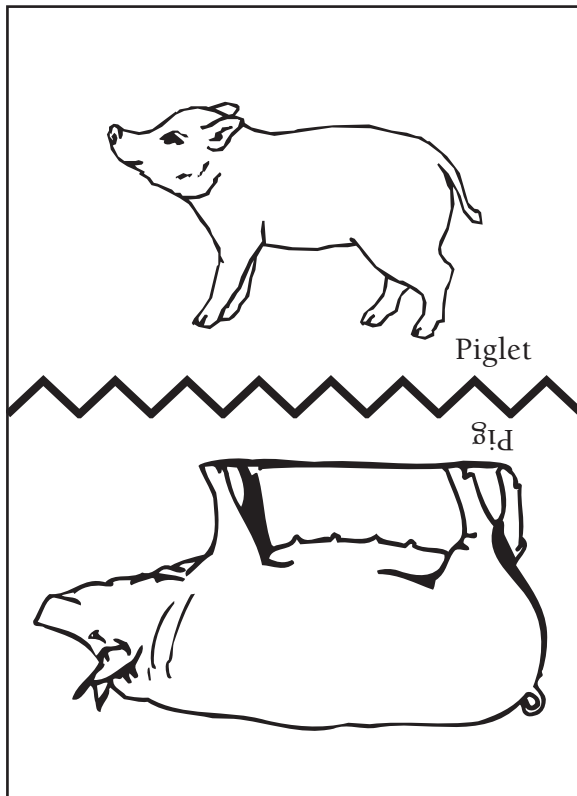
Animal Pictures



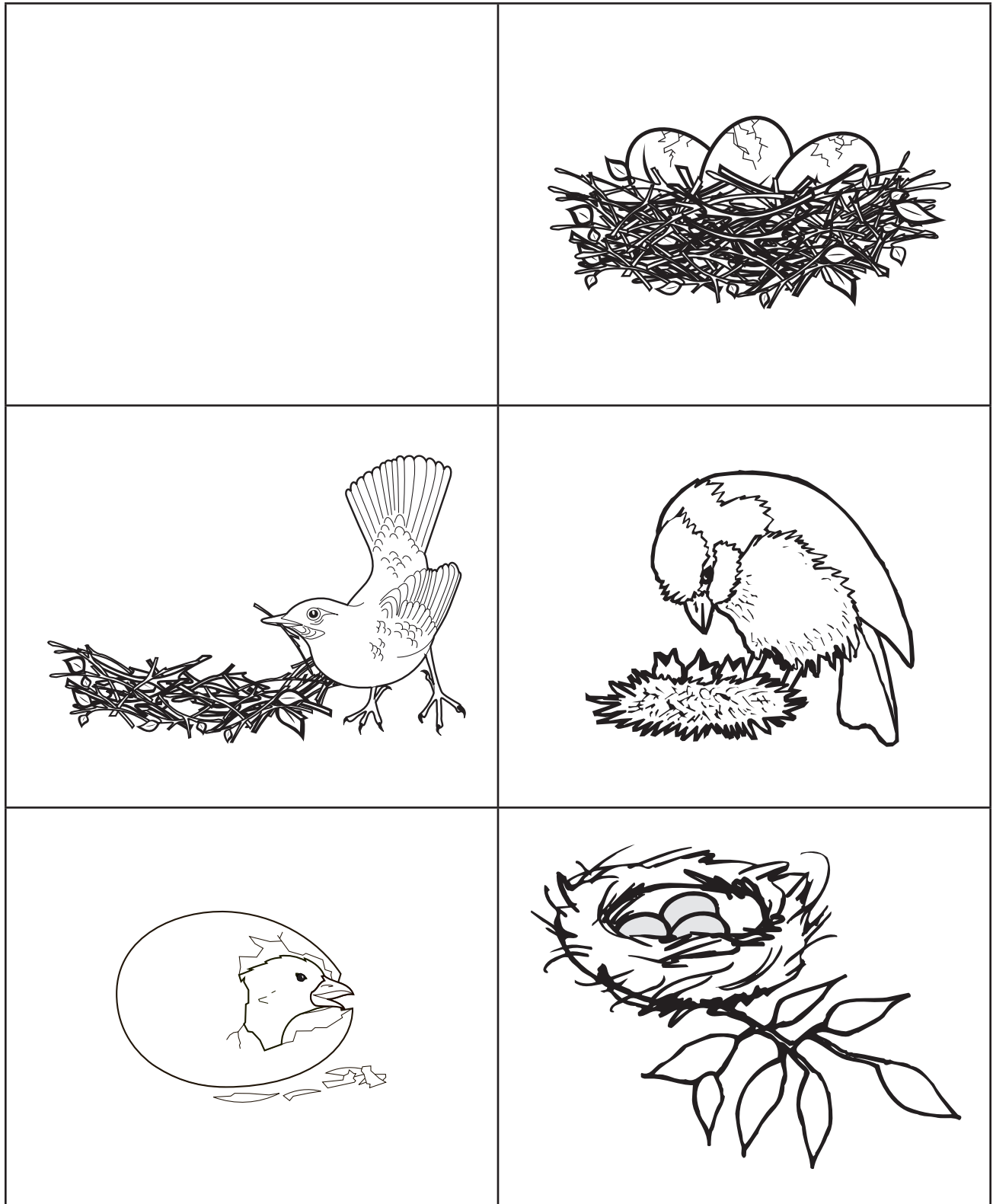
Adult and Baby Animal Matching Cards



Adult and Baby Animal Matching Cards



How an Egg Hatches



Content
Standard
III

Objective
2

Connections

Camp Paws and Claws & Farm Animals

Standard III:

Students will develop an understanding of their environment.

Objective 2:

Observe and describe animals in local environment.

Intended Learning Outcomes:

1. Observe, describe, draw, and compare familiar animals.
2. Describe how young animals are different from adult animals.
3. Observe and imitate the sounds and movements of animals with songs, dances, and storytelling.
4. Distinguish between real and make-believe animal behaviors.

Content Connections:

Language Arts I, II, III, V, VII, VIII

Background Information

Camp Paws and Claws is a three-part activity that reinforces what students have learned throughout the year about animals. For this particular activity, students will learn about farm animals. They will learn about cows, pigs, hens, and ducks. Camp Paws and Claws provides several activities for students to earn badges for each animal. As the teacher, you can decide if students should complete all activities or only some.

Camp Paws and Claws can be done as a whole class or broken up into centers. If camp activities are broken up into centers, you should thoroughly explain each activity to the children. Also, you should provide written or picture instructions based on the needs of your students.

Prior to teaching Camp Paws and Claws, teachers should give an overview of the farm animals—ducks, pigs, cows, and hens. Students should be able to discuss realistic and unrealistic behaviors of farm animals, what adult and baby animals are called, identify and discuss various parts of farm animals, identify which animals live on a farm, and identify initial sounds of words.

Research Basis

Church, E. (2003). Scientific thinking: step-by-step. *Scholastic Early Childhood Today*. 6(4) 35-41.

In the primary grades, children are learning about science and the world. Science skills—observe, compare, sort, organize, predict, experiment, evaluate and apply are essential to their learning. It

is important for students to understand the process involved with experimenting in science.

LeVine, J. (2002). Teaching ideas: writing letters to support literacy. *The Reading Teacher*. 56 (3) 232-239.

The more students write the more proficient they become. A simple daily message can include daily activities or another message to the students will enable children to read some of the message early in the school year.

Invitation to Learn

Sing *Old McDonald Had A Farm* as a class. Discuss the various animals that can be on a farm and the sounds they make.

Instructional Procedures

Group students into four small groups or complete activities as a class. Each animal will have a tub with all materials necessary to complete the activities to earn the badge. Explain all activities to children prior to allowing them to go to the centers. In each tub keep an example so that students know what to do.

Cows

1. Have the students read the book *Click, Clack, Moo: Cows That Type*.
2. Make a cow puppet. On cardstock, print the Cow master and have students cut it out. Using a black Bingo marker, put the black spots on the cow. Attach the cow to a craft stick or a paper bag. When puppet is finished, have a group orally tell a story using their cow puppets. The story can have realistic and unrealistic cow behaviors.
3. Read, *Animal Babies*, the section on cows. In the tub have three-dimensional models of a mother cow and her baby. Have the students draw a picture of a cow and calf in their Science Journal.
4. When they are finished, they may cut out and color the cow badge and glue it to their vest.

Pigs

1. Have the students read the book, *Three Little Pigs*. Have the students as a group orally sequence the events in the story. Make sure they discuss the order in which the homes were built in and what materials were used to build the houses.

Materials

- ☐ Cow
- ☐ Three Little Pig Houses
- ☐ Hay or raffia
- ☐ Pretzel sticks
- ☐ Red construction paper
- ☐ Tubs
- ☐ Drawing paper
- ☐ Crayons
- ☐ Pencils
- ☐ Craft stick
- ☐ Animal Badges
- ☐ Paper vest
- ☐ Science Journals
- ☐ Student lab coats
- ☐ Black Bingo marker
- ☐ Cow models
- ☐ Large jar
- ☐ Marble
- ☐ Whipping cream
- ☐ Mrs. Wishy Washy Characters
- ☐ Brown paint
- ☐ Crisco
- ☐ Feathers



The teacher or another adult should be rotating the room and listening to the discussion of students to determine level of understanding.

2. The Little Pig House Activity. Decorate the three houses the pigs made and write what material the house was made from. The first house is made of hay and students use hay or raffia to cover the house. The second house is made of sticks and students will use pretzel sticks to cover the house. The third house is bricks and students will use red construction paper rectangles and a triangle to cover the house. In the pig tub the teacher should include the words: hay, sticks, and bricks on cards. Students will practice using initial sounds to determine which word goes with what house.
3. In *Animal Babies*, read the section on piglets. Have students orally identify the various parts of a piglet with a friend.
4. When all activities are complete, the children may color and cut out their pig badge.

Hens

1. Read the book, *Little Red Hen*. Orally discuss with a friend ways they can be helpful at home and school.
2. Make butter. This activity needs an adult present and should be done as a whole class. Have the students put on their “lab coats”. Lab coats are men’s long sleeve dress shirts (or even short sleeved will work). Have the students use their science journals to determine what would happen if they mix cream and a marble in a jar. Have the students either draw a picture or write in their science journals what they predict will happen. Discuss with the students what cream is and where it comes from. The process of making butter takes 20-30 minutes. When the butter is finished, you will need to add salt to taste. Have the students all take turns and shake the jar. Explain that you need everyone to help in order for it to be successful. If one person tried to do it their arms would get very tired. Then, discuss as a class how the little red hen could have had an easier time if all the animals had helped her.
3. Give students a piece of white and wheat bread to use to sample the butter with. Graph which they liked better using their name on a yellow post-it note. The graph can be drawn on the board and as a class discuss the results of your graph.
4. Have the students write a post card home telling their parents about making butter. Give each student a quarter sheet of

construction paper. On one side they will draw a picture about farm animals. On the other side they will tell their parents about making butter. Have them fill out their science journals again with their results if they were right or wrong about their predictions. This can be done with words or pictures depending on the ability of the student.

5. Students can then color and cut out their hen badge.

Duck

1. Read *Mrs. Wishy Washy*. As a group review the order of the animals in the story orally and with pictures.
2. Create a craft stick puppet for each animal. The puppet will be two sided. On one side the animal will be clean and on the other side the students will finger paint brown mud on the animal.
3. Have the students retell the events of the story with their puppets. They should show the correct side of the puppet while retelling the story.
4. Feather Science Experiment. This is an activity for the whole class and an adult is needed. If possible, collect feathers from ducks. Place the feathers in water and show how the feather does not absorb water. In the science journals have the students write or draw the reason they feel a ducks' feathers do not get wet when in water. Tell the students that duck's feathers have a special coating that allows them to stay dry. Take regular feathers and place them in water. The feathers get very wet. Allow the students to use Crisco to cover the regular feathers to simulate the protective coating and place the feathers in water. Allow them time to explain what they learned to you. Have them record their results in the science journal.
5. When finished, have the students color and cut out their duck badge.

Assessment Suggestions

- Collect and assess science journals at the end of the day.
- Have the students retell the story of *Mrs. Wishy Washy* using their puppets.
- Observe students and their reactions as you complete the Duck Feather Experiment. Ask questions to determine understanding and thinking during the process.

- Discuss various farm animals with the students and have them tell you what they have learned.

Curriculum Extensions/Adaptations/Integration

- Have them write sentences or phrases in their science journals instead of just pictures.
- Pair up an advanced student with a student who struggles to provide them assistance.
- Each animal includes several activities. As a teacher you can decide to do all activities or select one that you feel would be best for your students.

Family Connections

- Have the parents write a postcard to their child to bring back to school the next day. The children will be taking home a postcard about making butter, and their parents write them a note and bring it to school the next day.
- Retell the story of Mrs. Wishy Washy.
- Have them tell their parents about ducks' feathers and the coating that protects them from getting wet.

Additional Resources

Books

Click, Clack, Moo: Cows That Type, by Doreen Cronin; ISBN

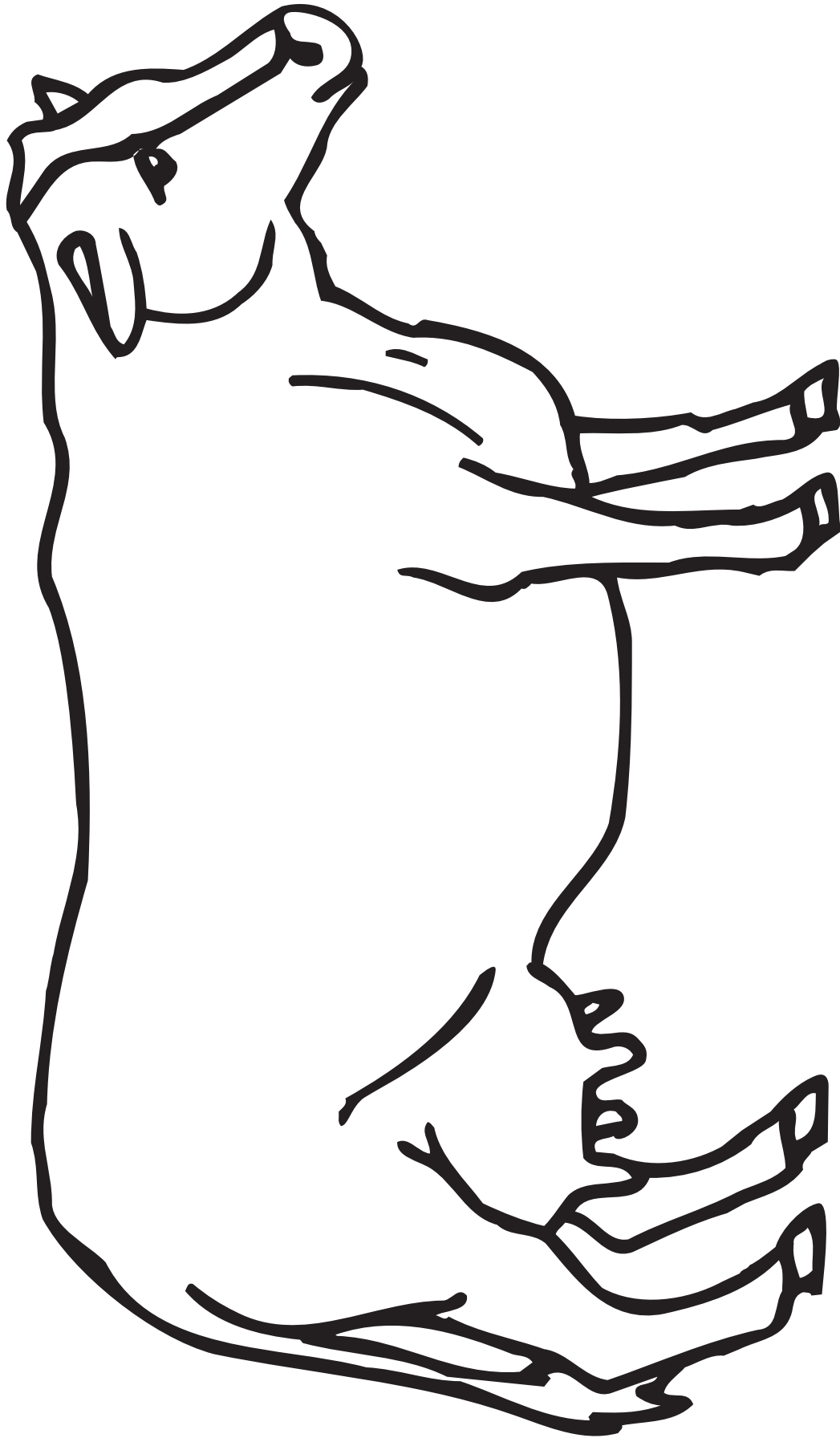
Baby Animals, by Angela Royston; ISBN 0689715633

The Three Little Pigs by Heather Amery; ISBN 0794506097

Little Red Hen, by Byron Barton; ISBN 0060216751

Mrs. Wishy Washy, by Joy Cowley; ISBN: 0780275764

Cow

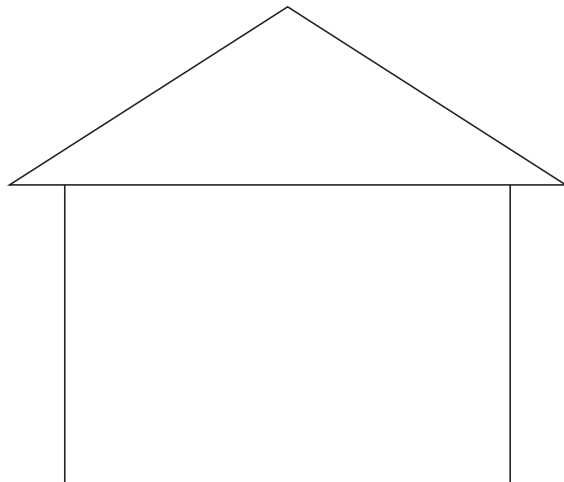


Name _____

Three Little Pigs Houses

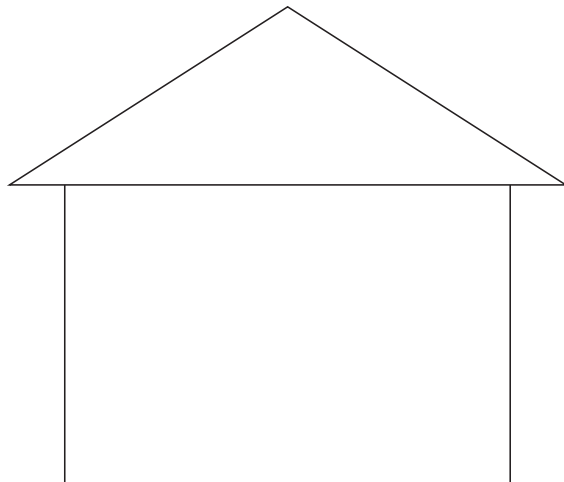
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_____.



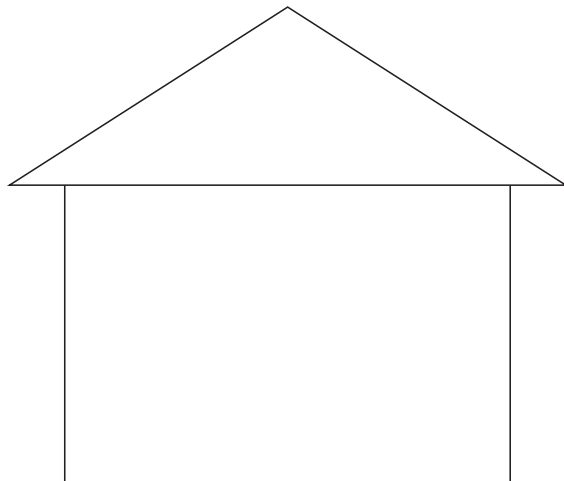
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_____.

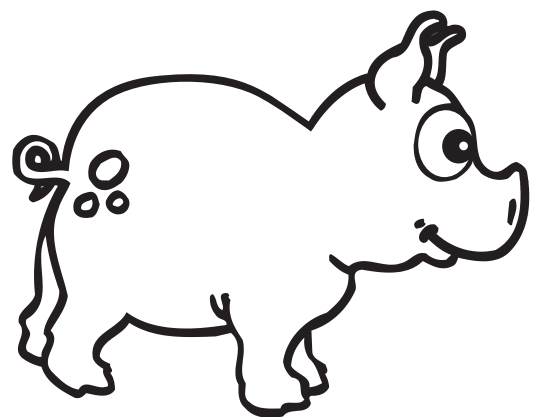
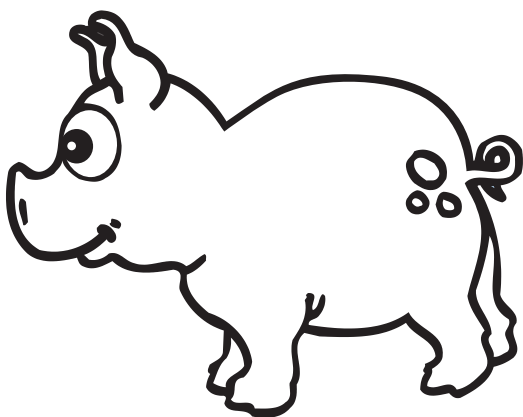
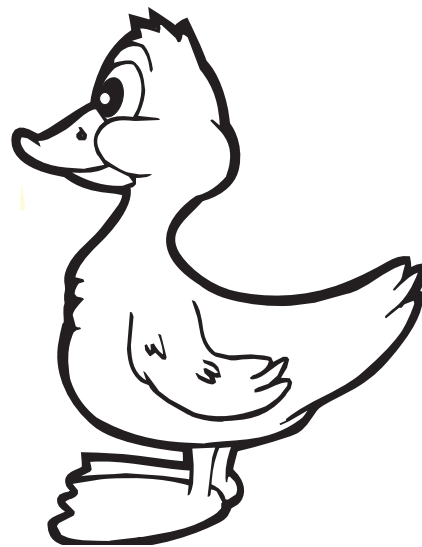
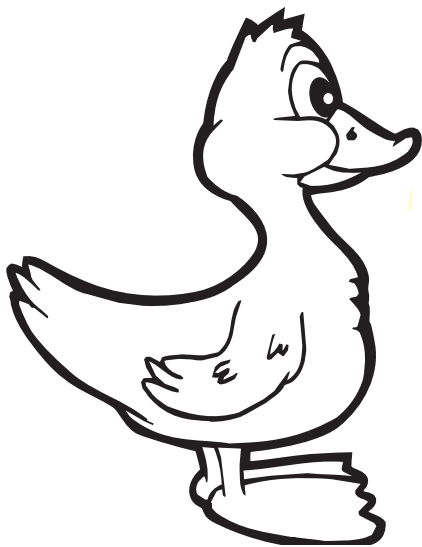
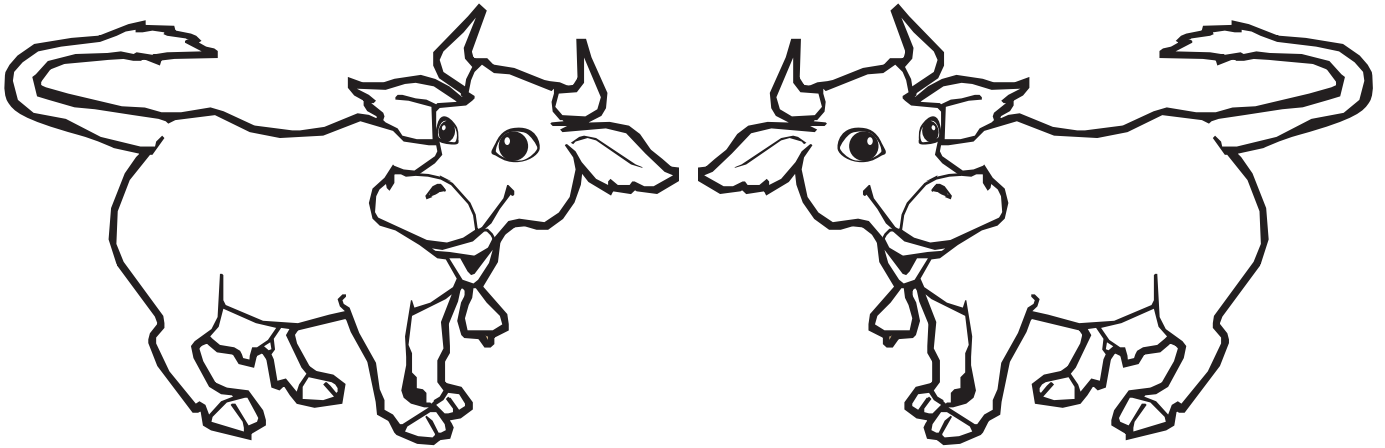


The third house was made out of

_____.













Mrs. Wishy Washy Characters

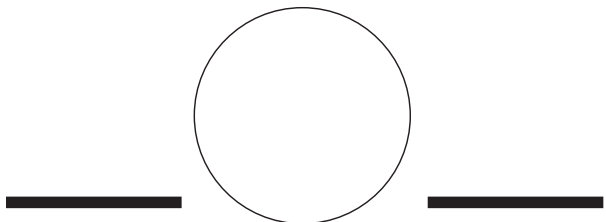
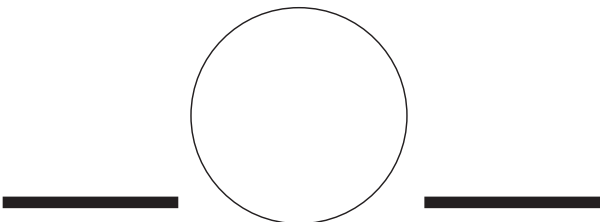
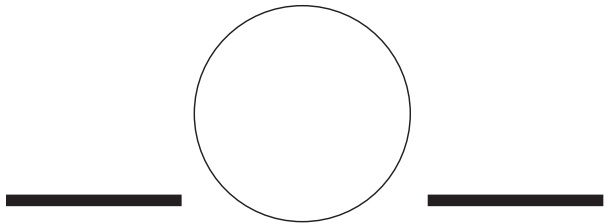
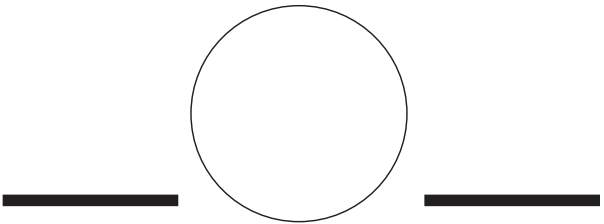
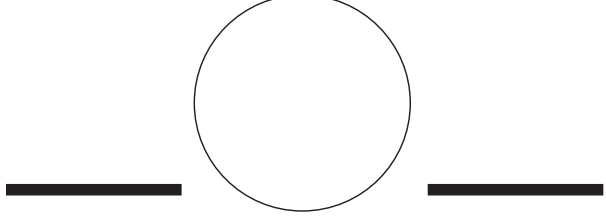
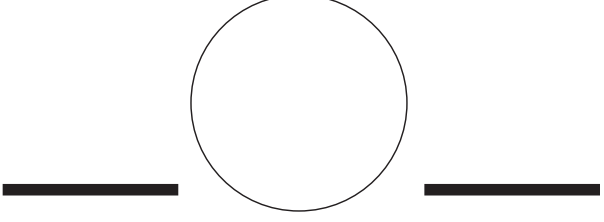
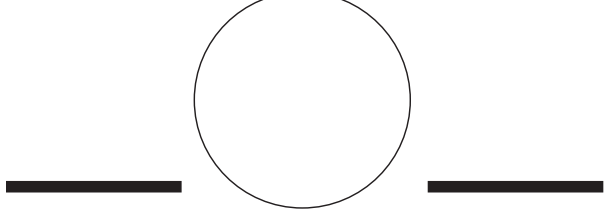
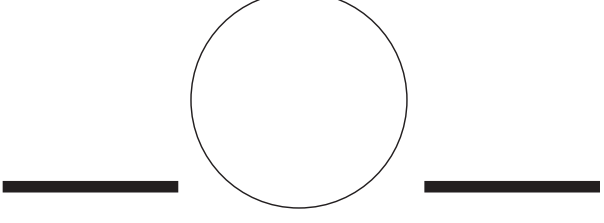
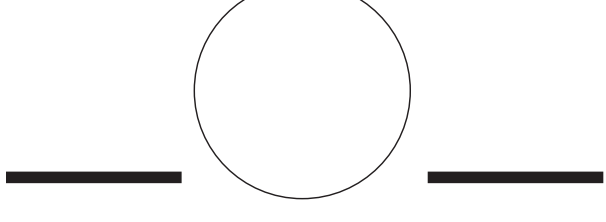
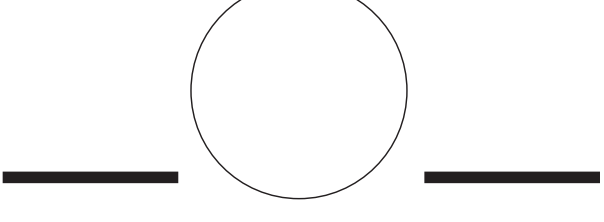


Appendix

Alligator More and Fewer

 _____	 _____
 _____	 _____
 _____	 _____
 _____	 _____
 _____	 _____

More/Fewer/Same

Number Stamp

Name _____

Spin-A-Number

Ten Frame Recording Sheet

Name _____

Number Recording Sheet 0-10

Ten Frame

Ten Frame

Number Cards

0	1	2	3
4	5	6	7
8	9	10	

Number Cards

0	1	2	3
4	5	6	7
8	9	10	

Name _____

Ten Frame Recording

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$$10 - \square = \square$$

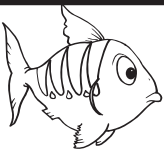









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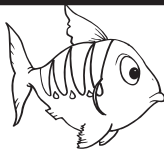

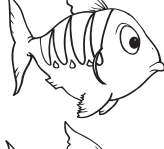

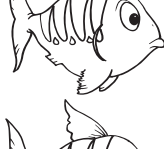





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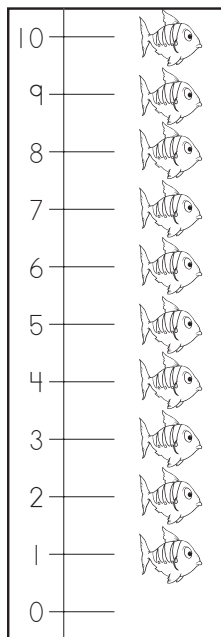
Fish Number Line

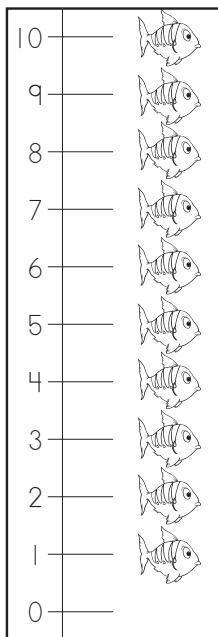
10	—	
9	—	
8	—	
7	—	
6	—	
5	—	
4	—	
3	—	
2	—	
1	—	
0	—	

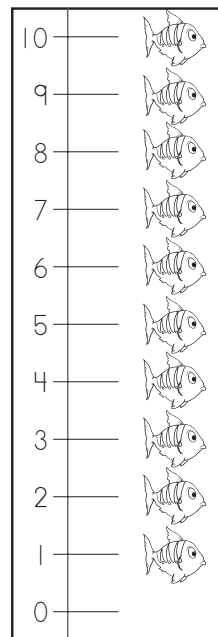
20	—	
19	—	
18	—	
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15	—	
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13	—	
12	—	
11	—	
10	—	Glue 10 Here

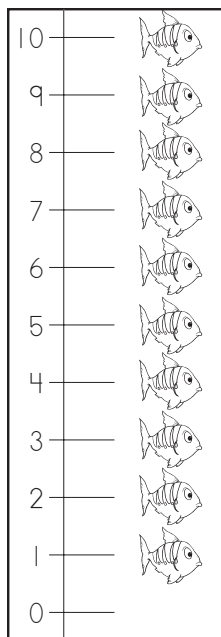
Name _____

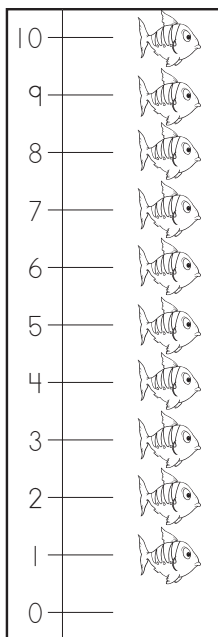
Fish Number Line Recording

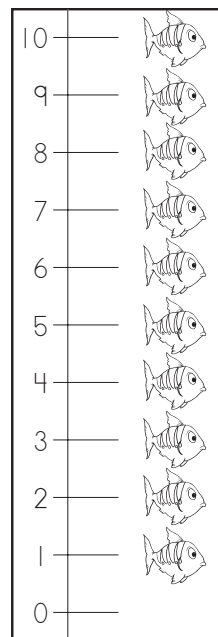












Fish Graph

Fish Graph Recording

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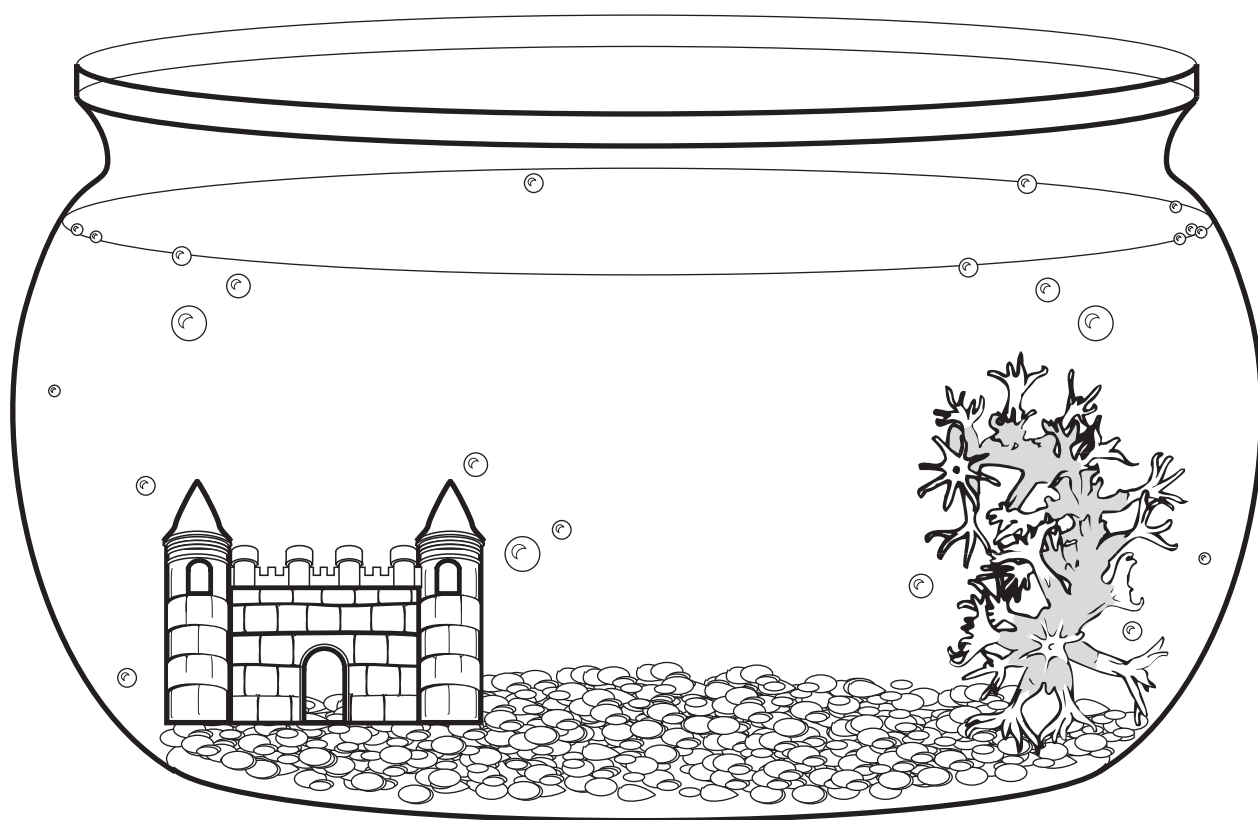
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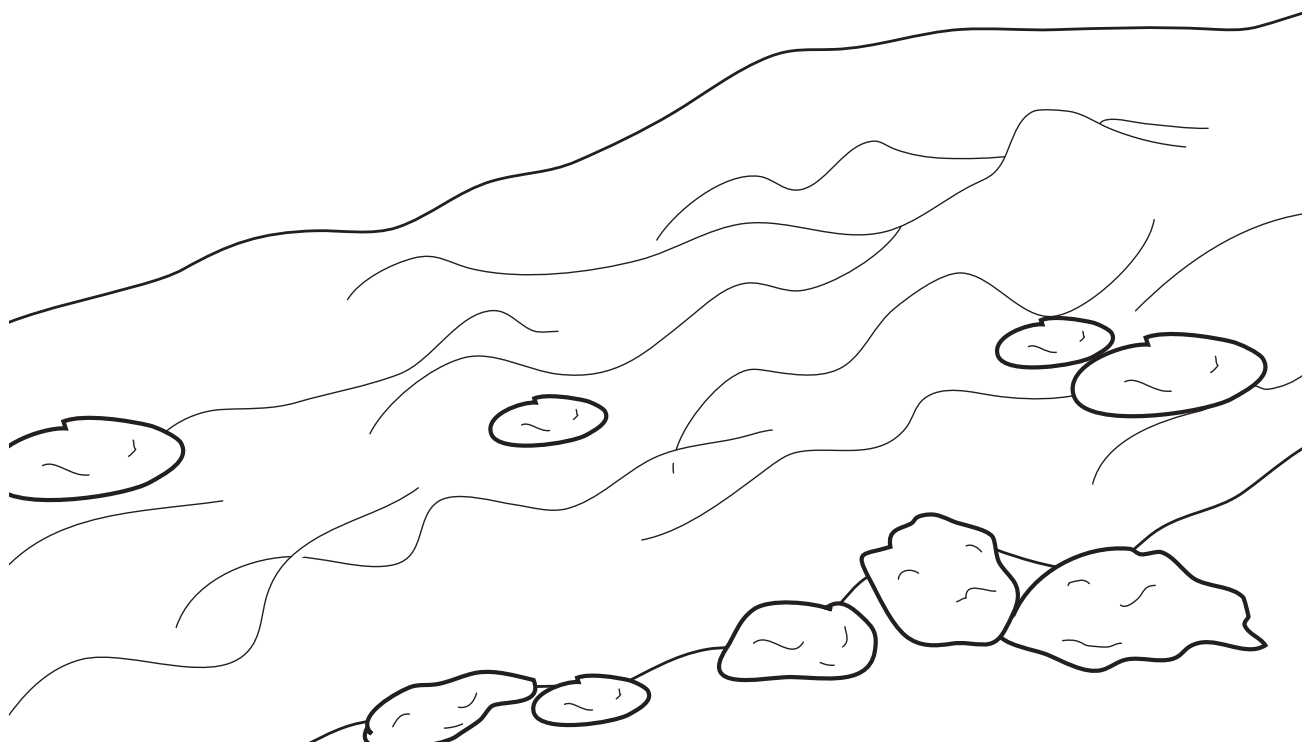
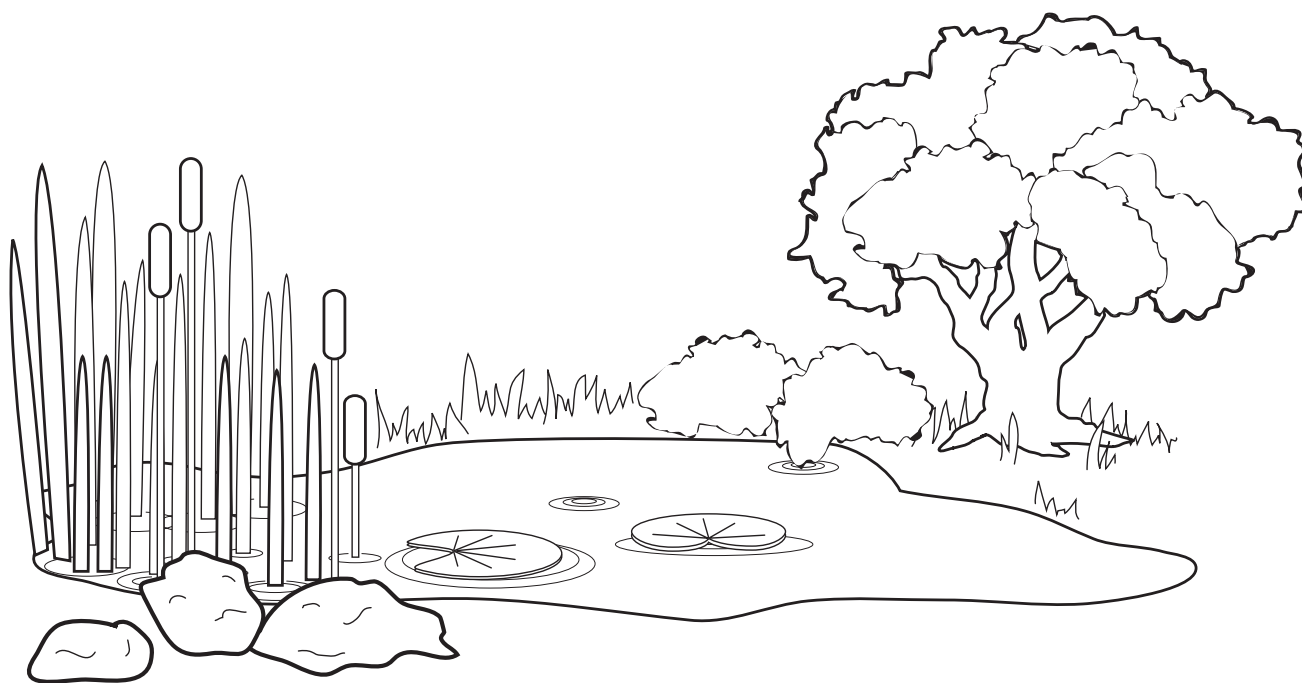
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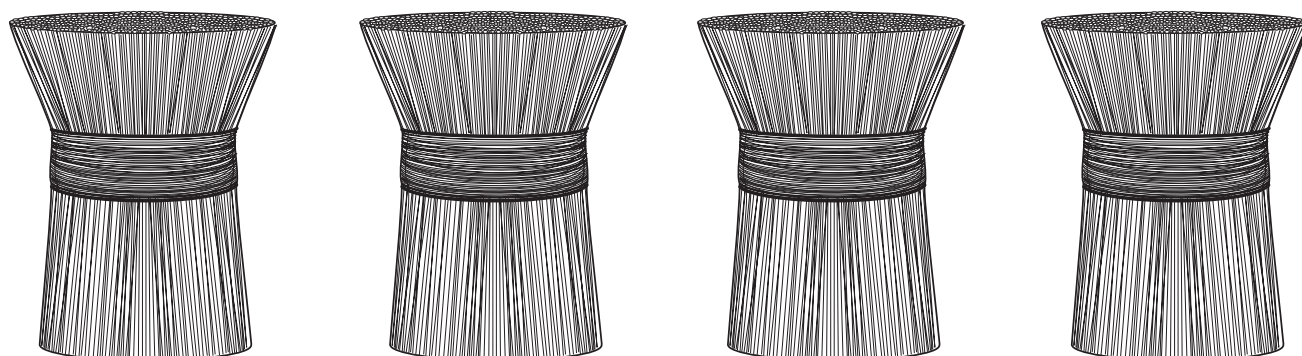
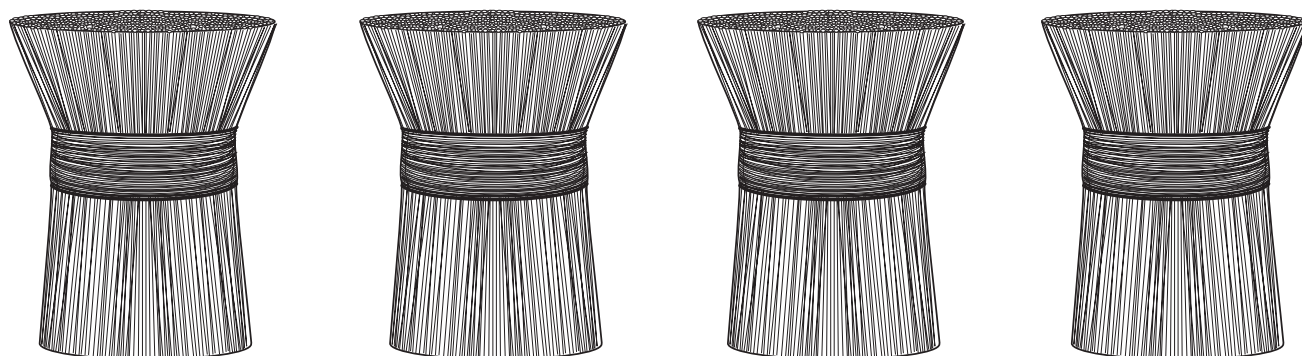
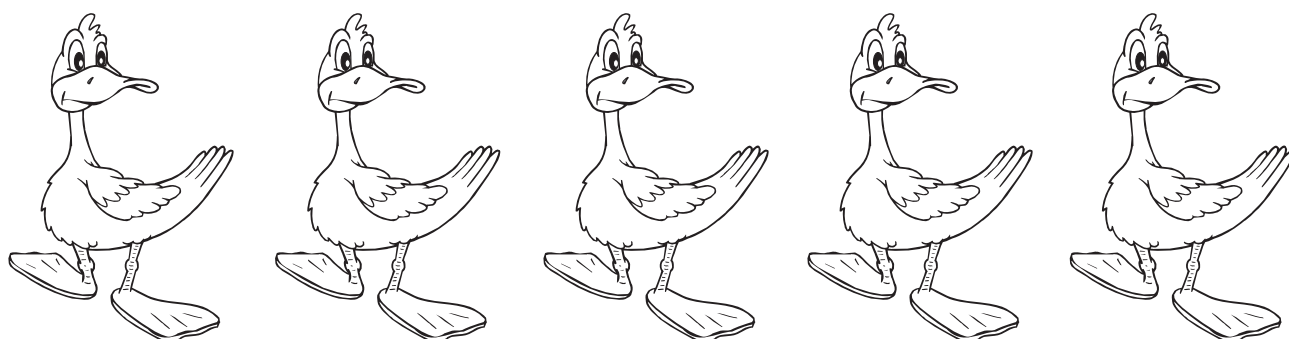
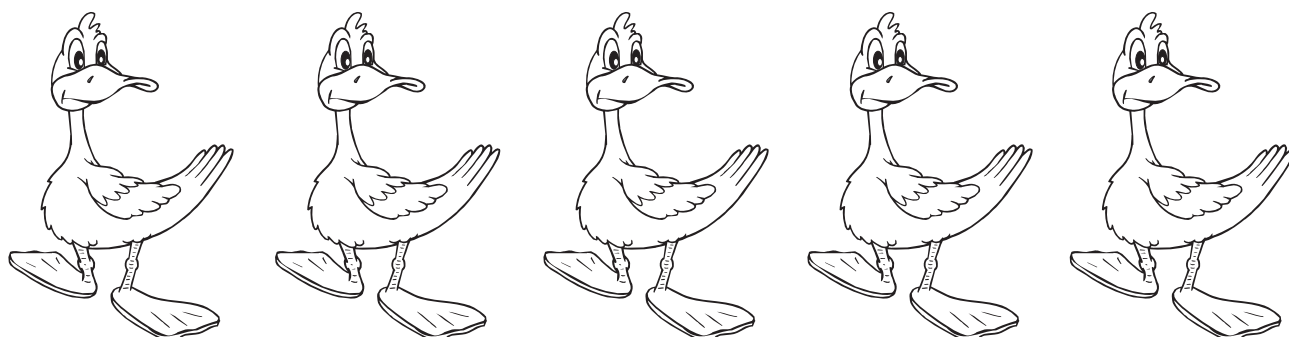
Fish Storyboards

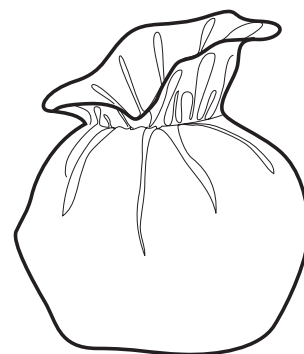
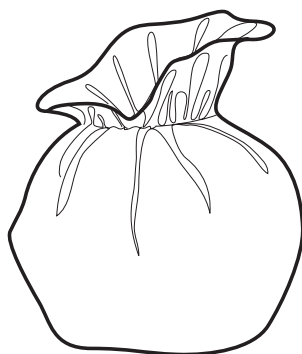
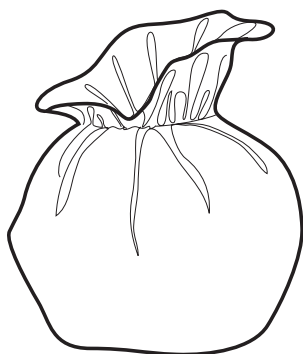
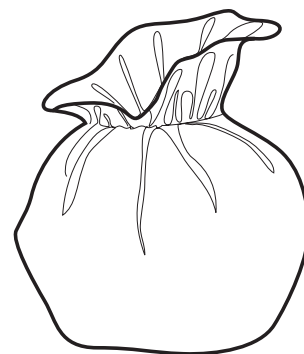
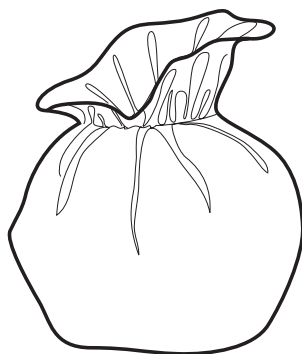
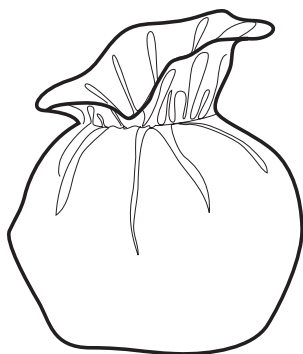


Fish Storyboards



Double the Ducks Cutouts

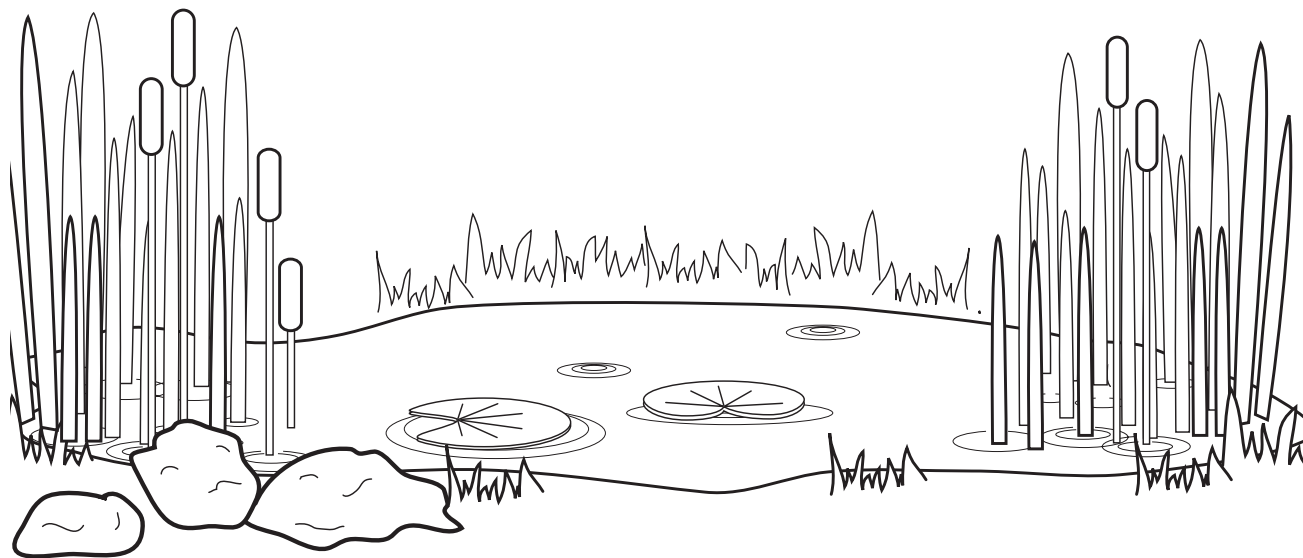




Duck Storyboard

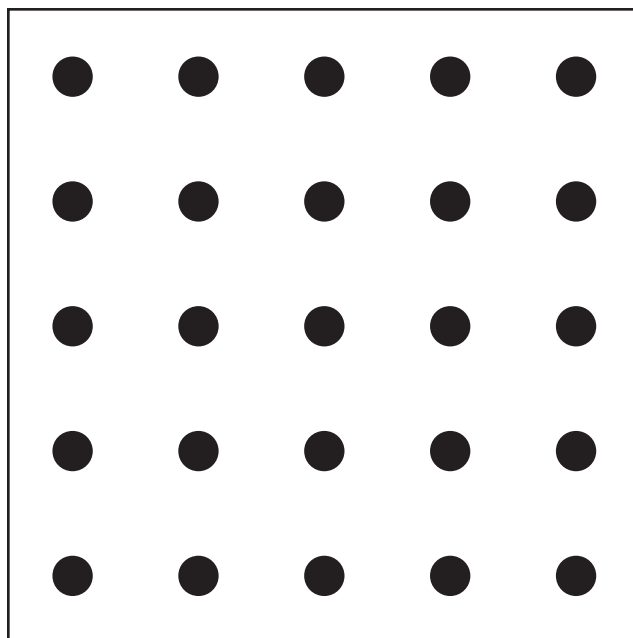
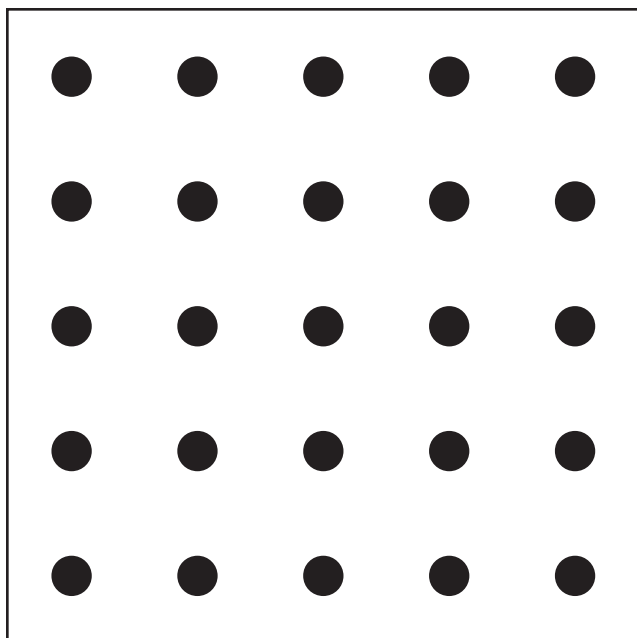


Duck Storyboard



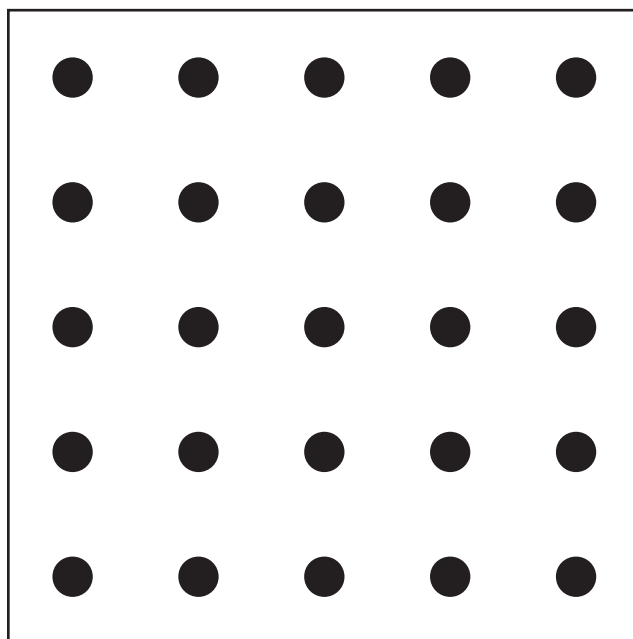
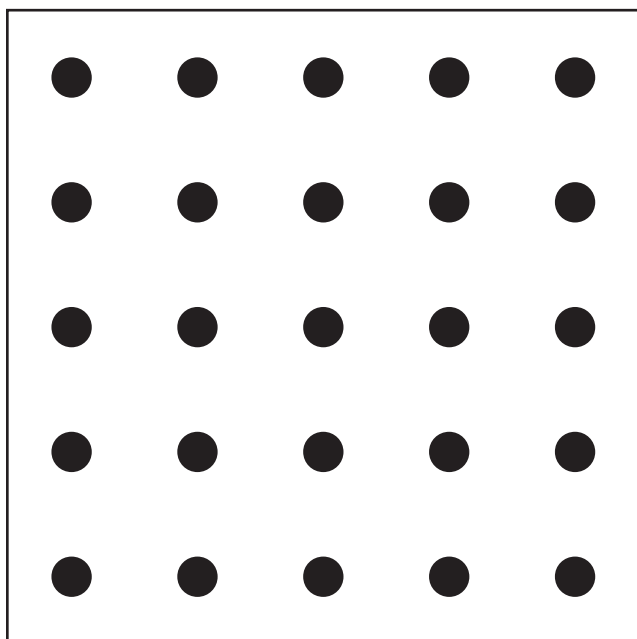
Doubled Duck Match Recording

Geoboard Doubles Recording Sheet



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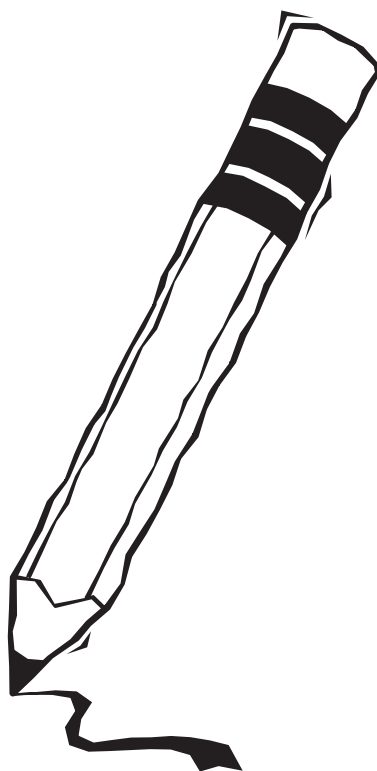
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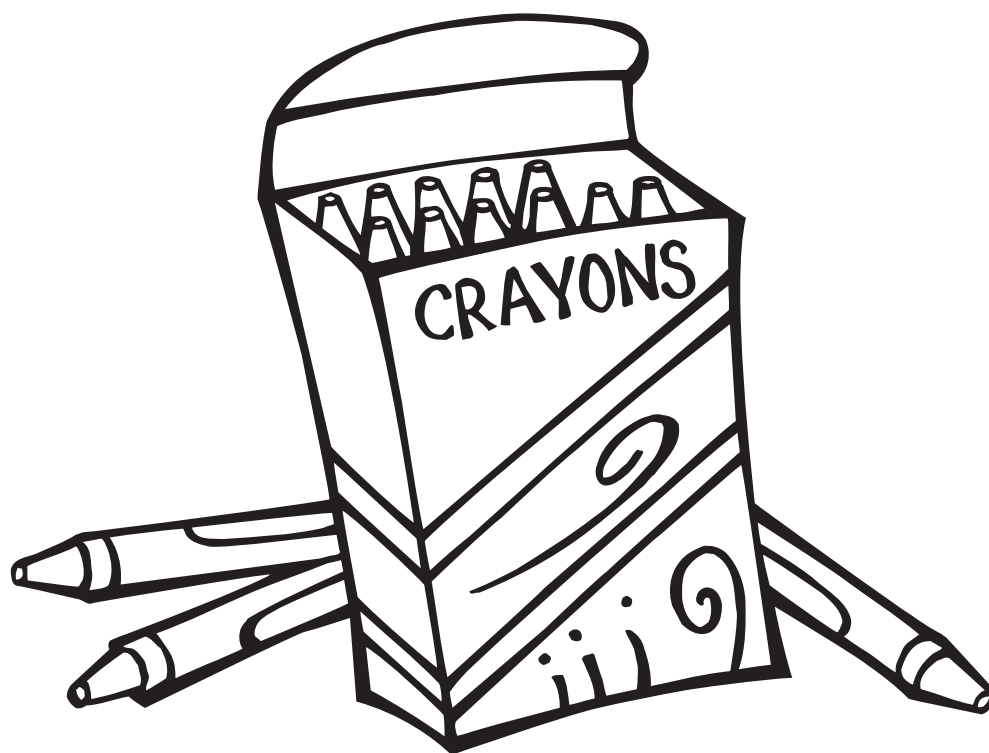
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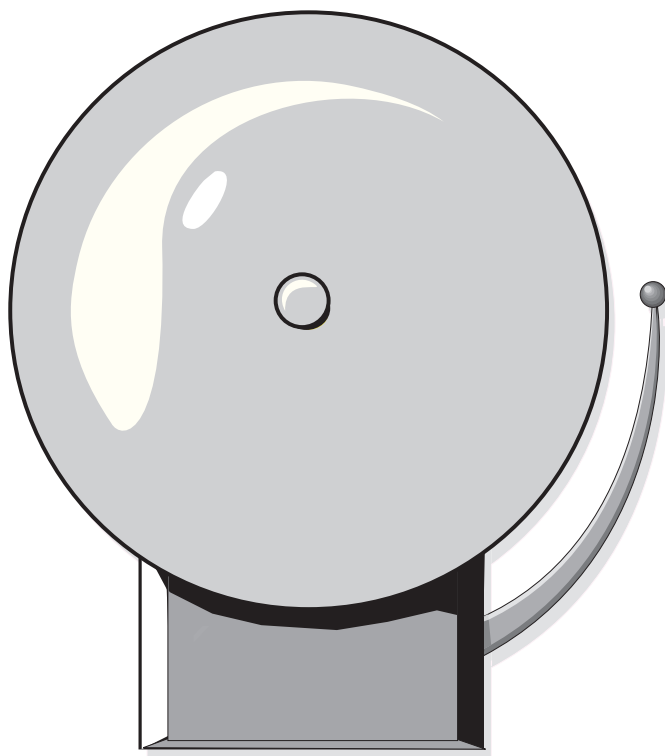
Picture Cards



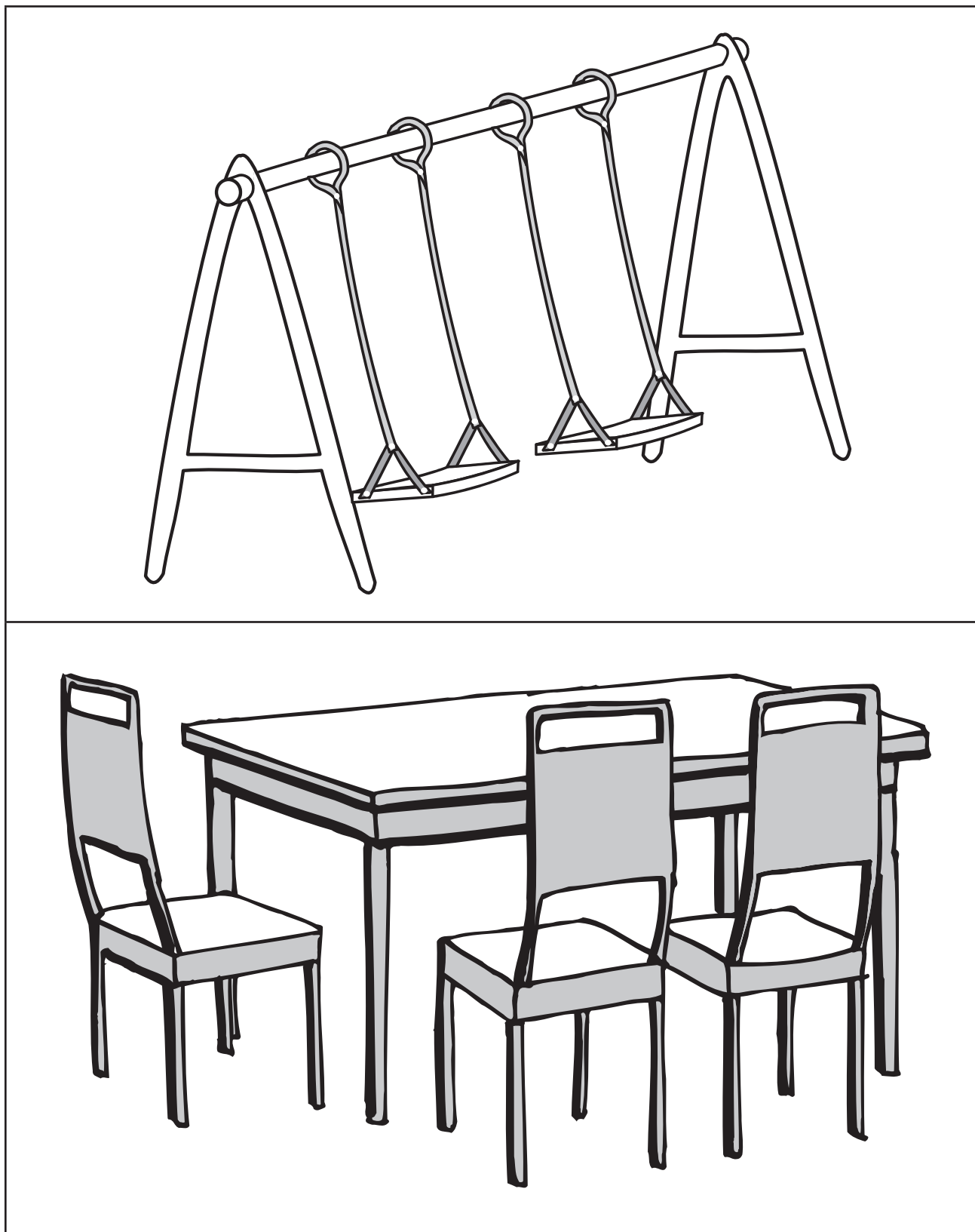
Picture Cards



Picture Cards



Picture Cards



Picture Cards

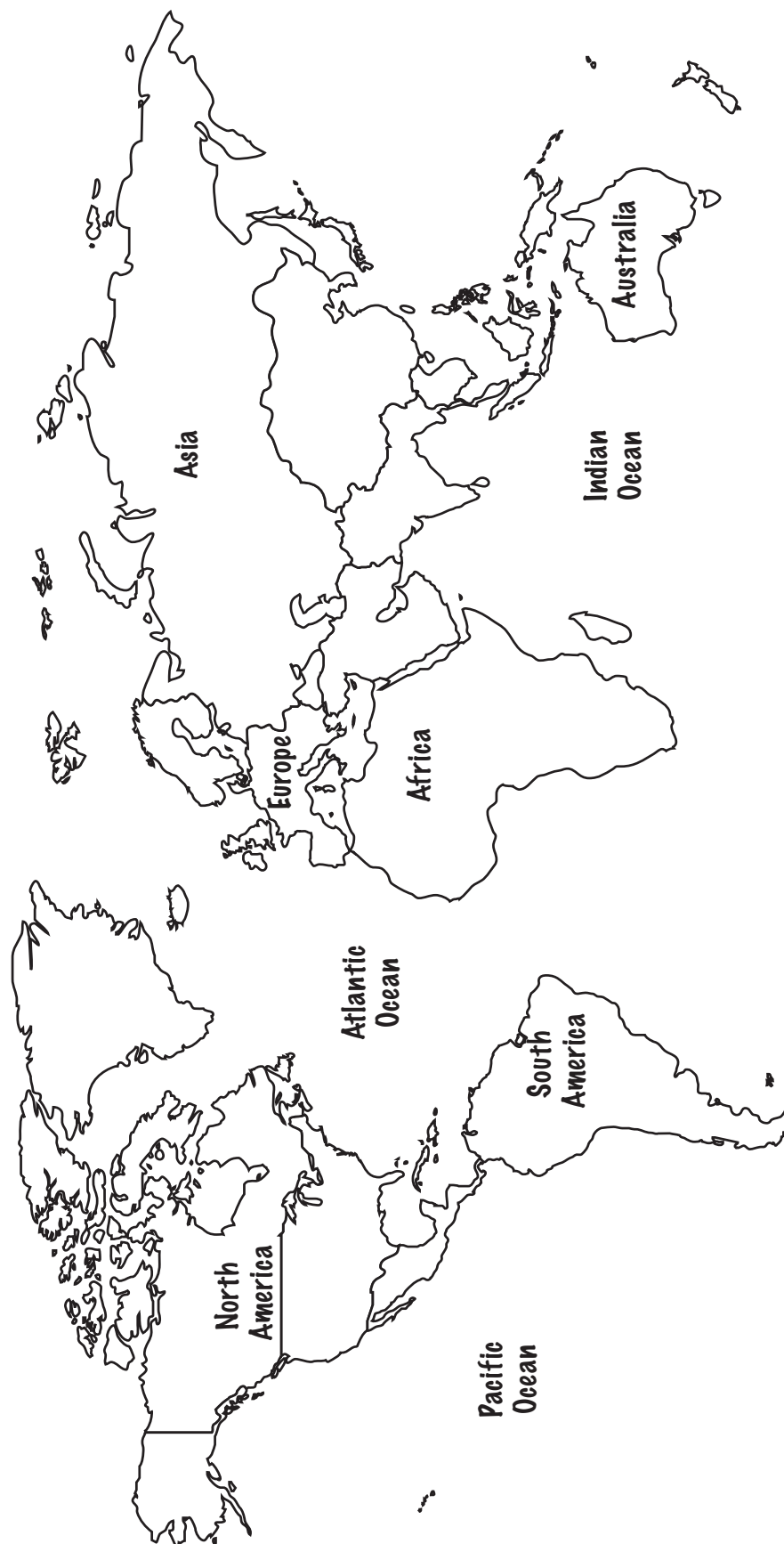


Name Bingo Card

Celebrating Winter Holidays

Name _____

World Map





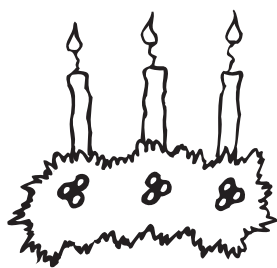
December



S	M	T	W	T	F	S

Hanukkah lasts for eight days. This year it begins on December _____
and ends on December _____.

Hanukkah



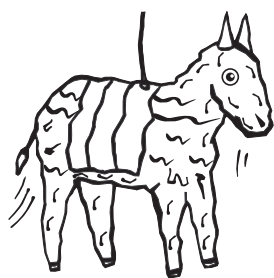
December



S	M	T	W	T	F	S

St. Lucia Day is celebrated on the same day each year. It is on December _____.

St. Lucia Day



December



S	M	T	W	T	F	S

La Posada is celebrated for nine days before Christmas. It starts on **December**
 _____ and ends on **December** _____.

Las Posadas



December

January

S	M	T	W	T	F	S

Kwanzaa lasts for seven days. It begins on December _____
and ends on January _____.

Kwanzaa



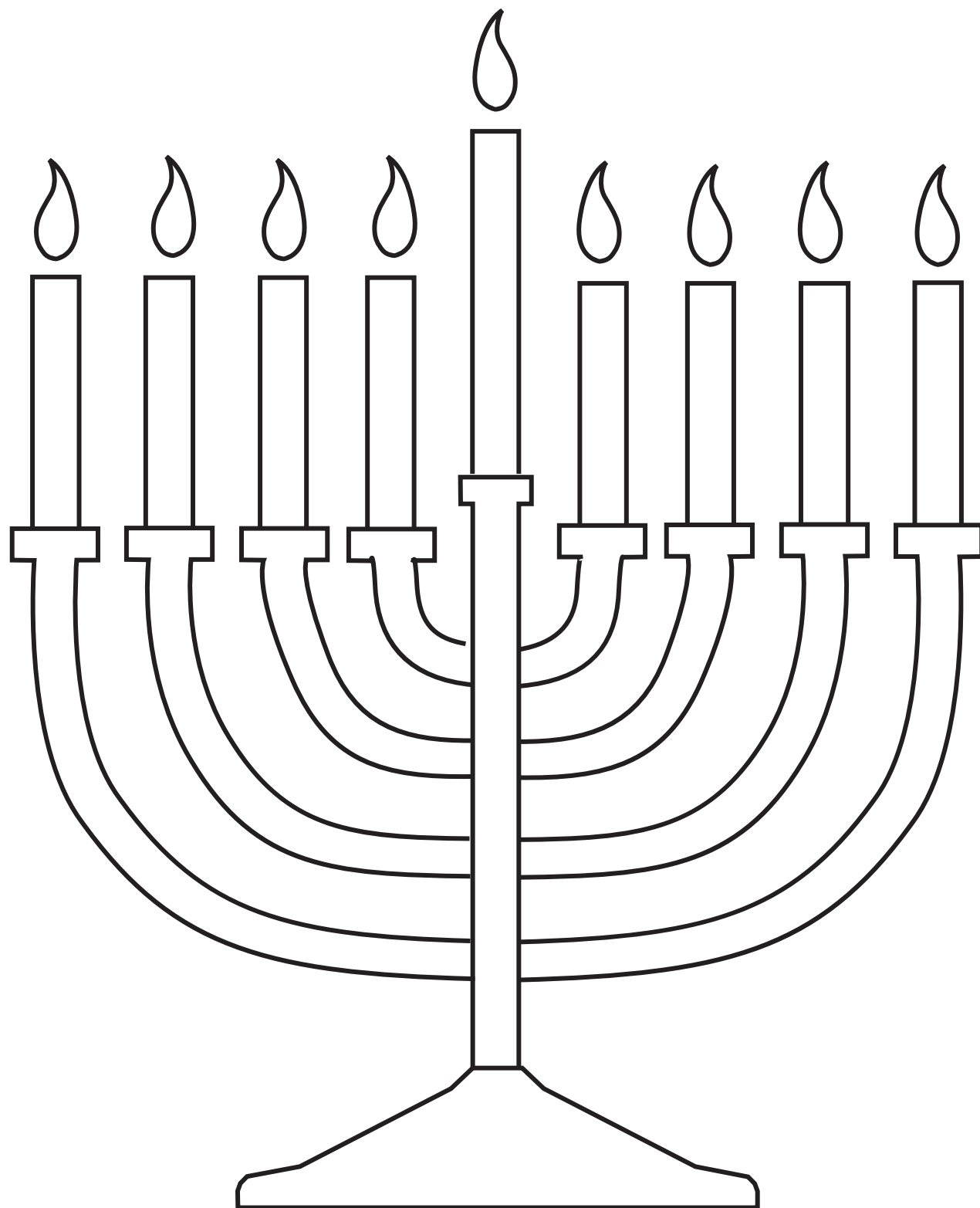
January

February

S	M	T	W	T	F	S

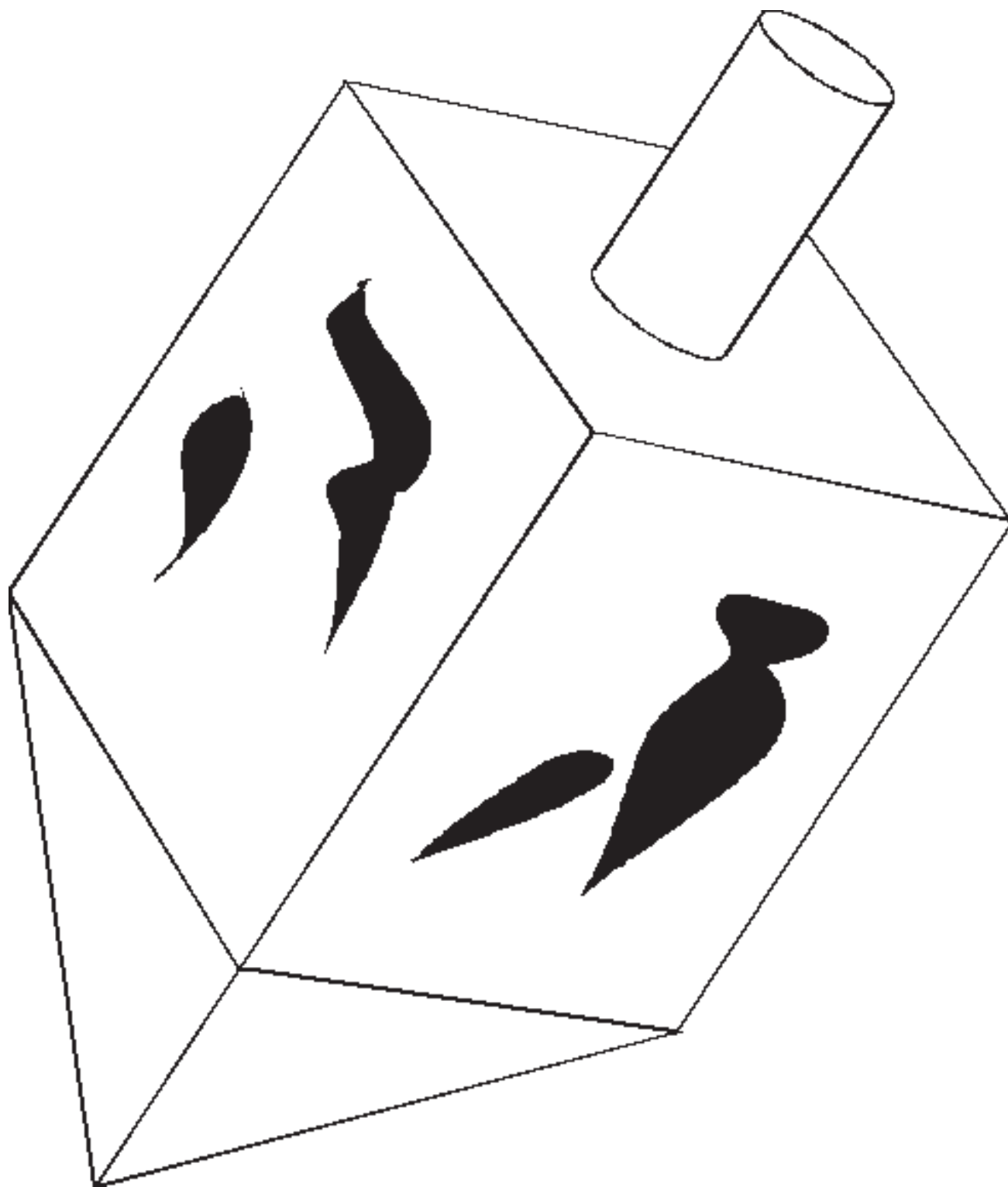
Chinese New Year varies from January _____ to February _____.

Chinese New Year



Menorah

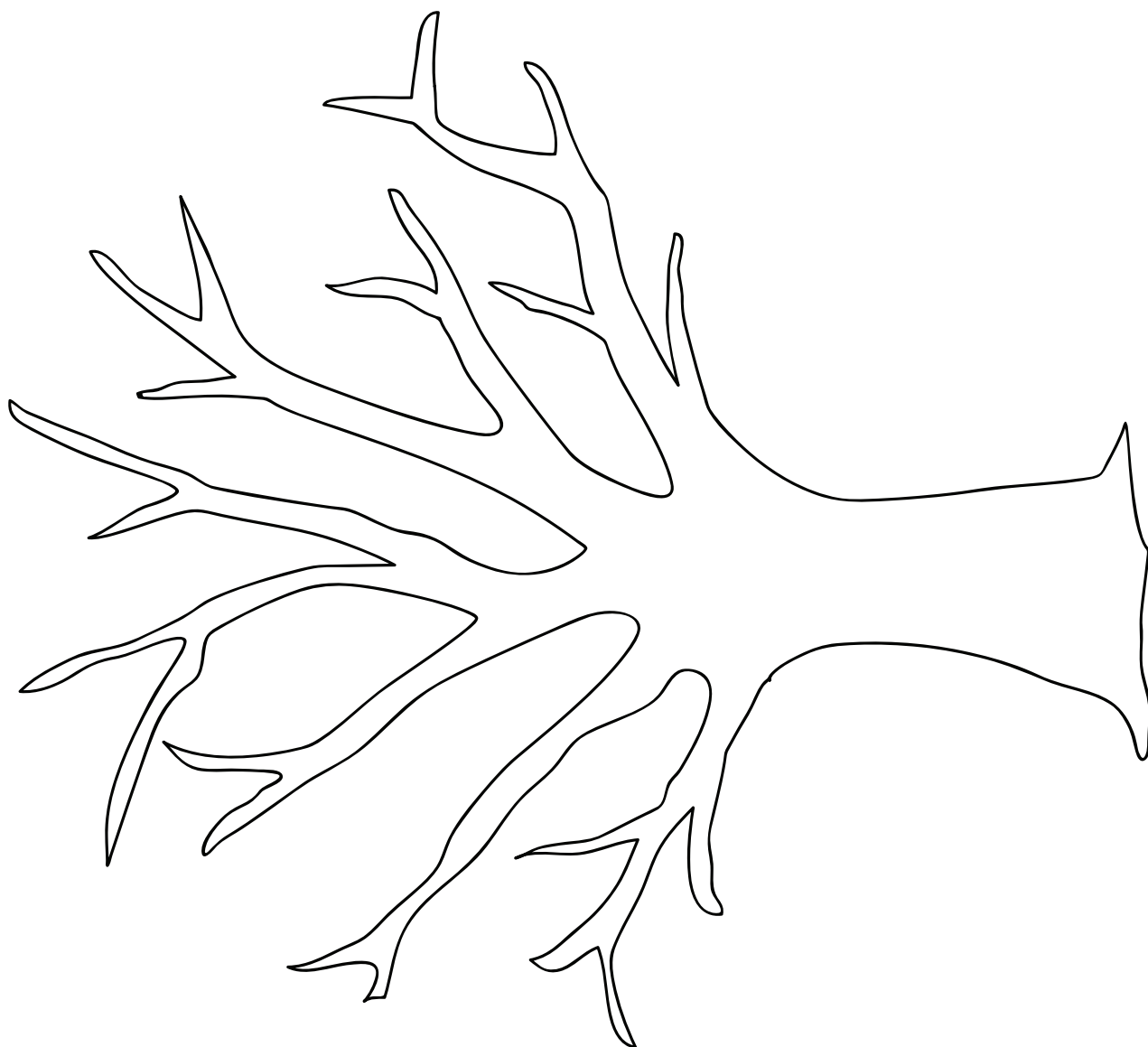
Dreidel



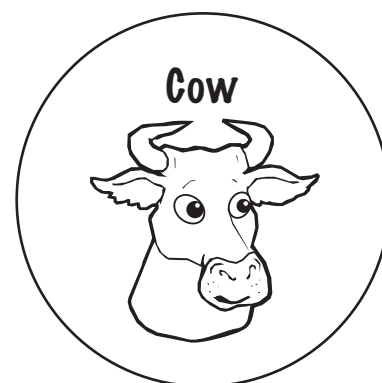
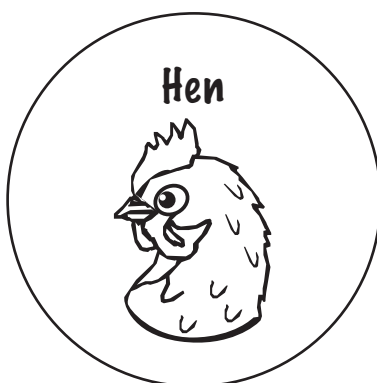
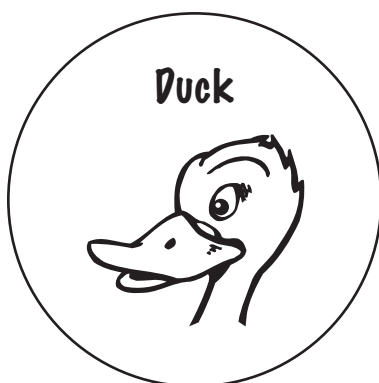
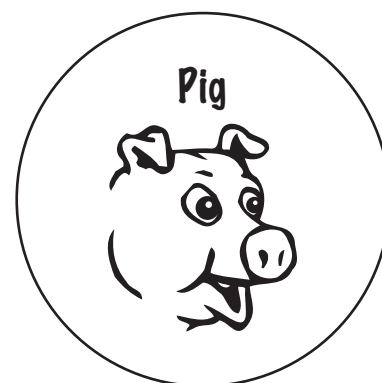
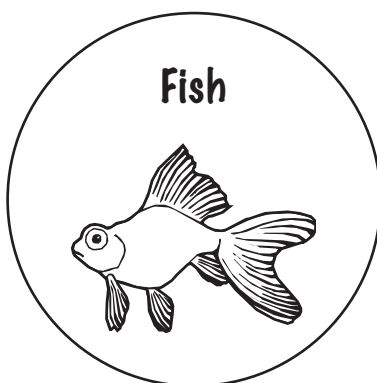
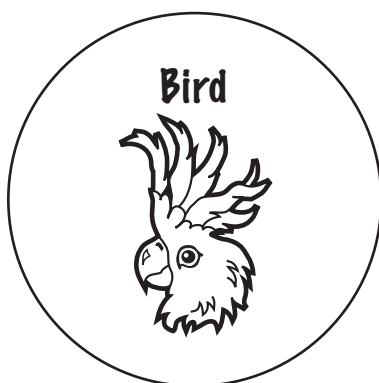
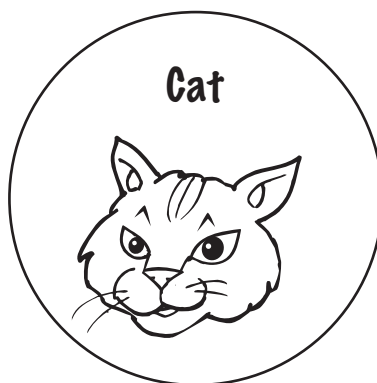
Kinara



Tree Outline



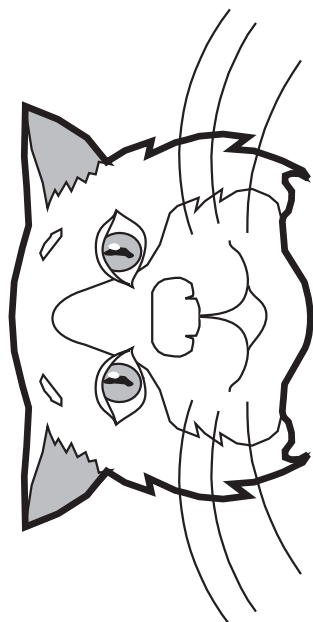
Animal Badges



My Cat Book

This book is dedicated to

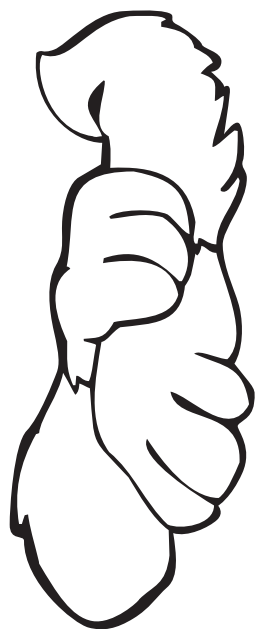
By:



Cats like to

Cats have

ears.



Cats have

paws.



Cats have

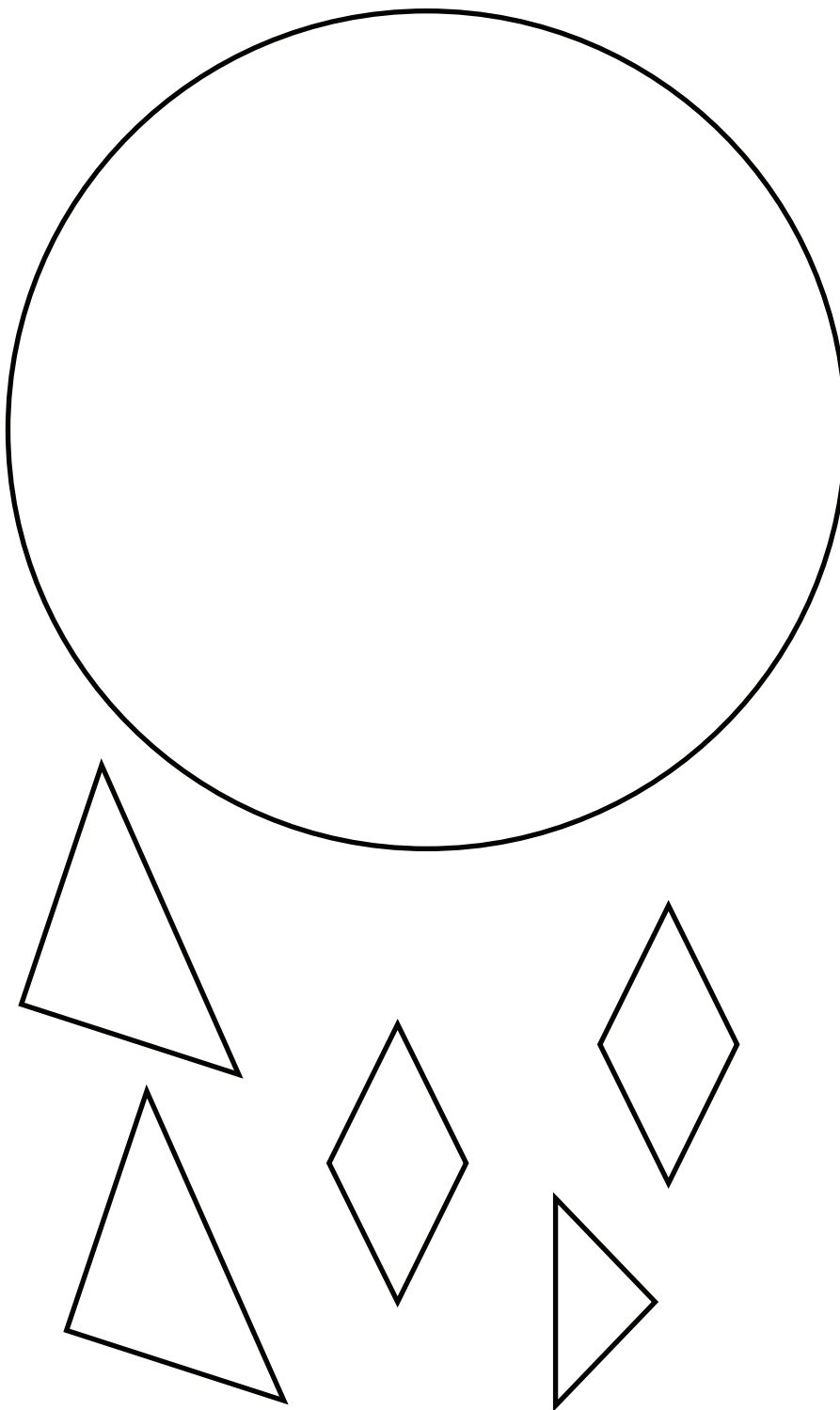
on their body.



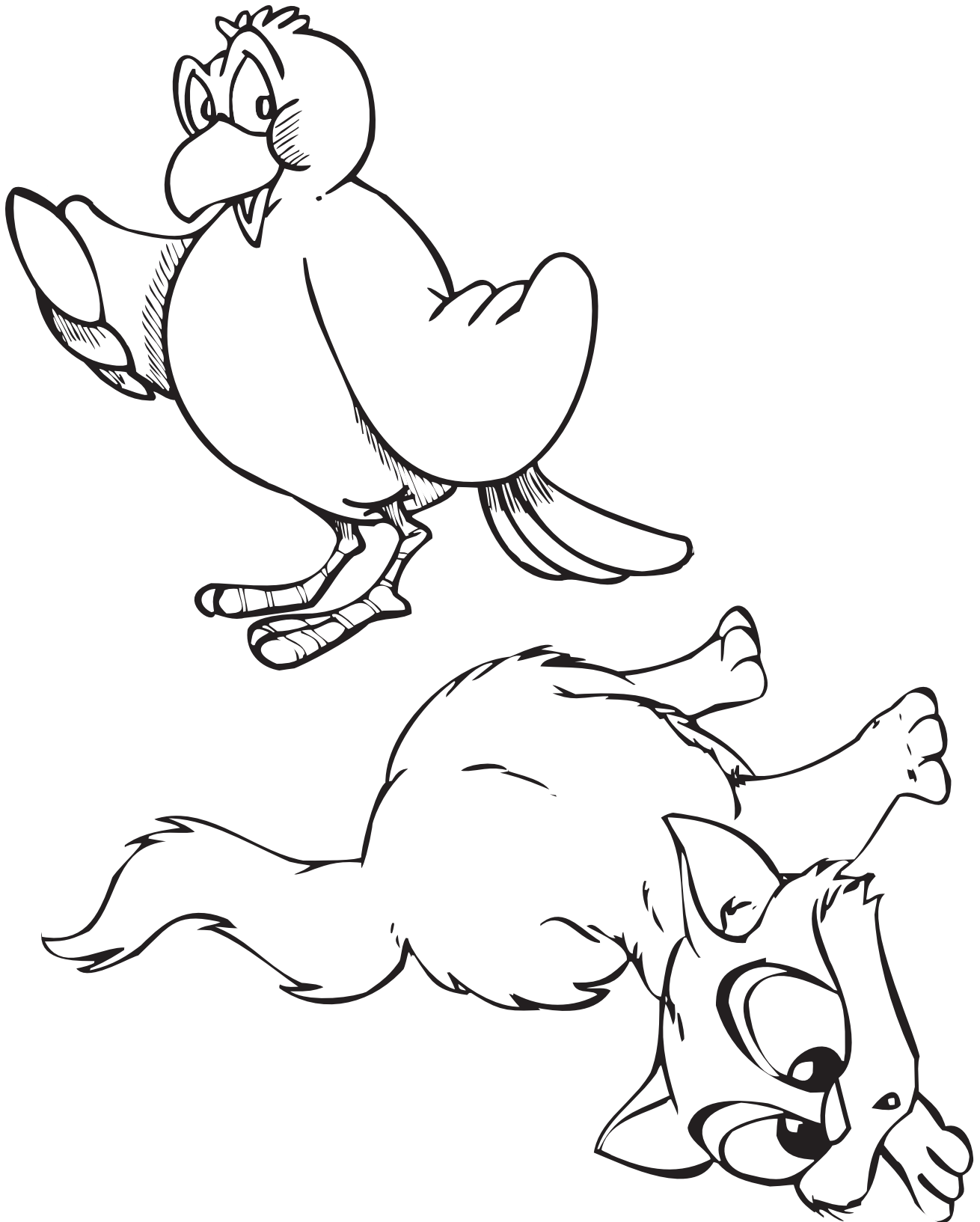
The End!

A baby cat is called a

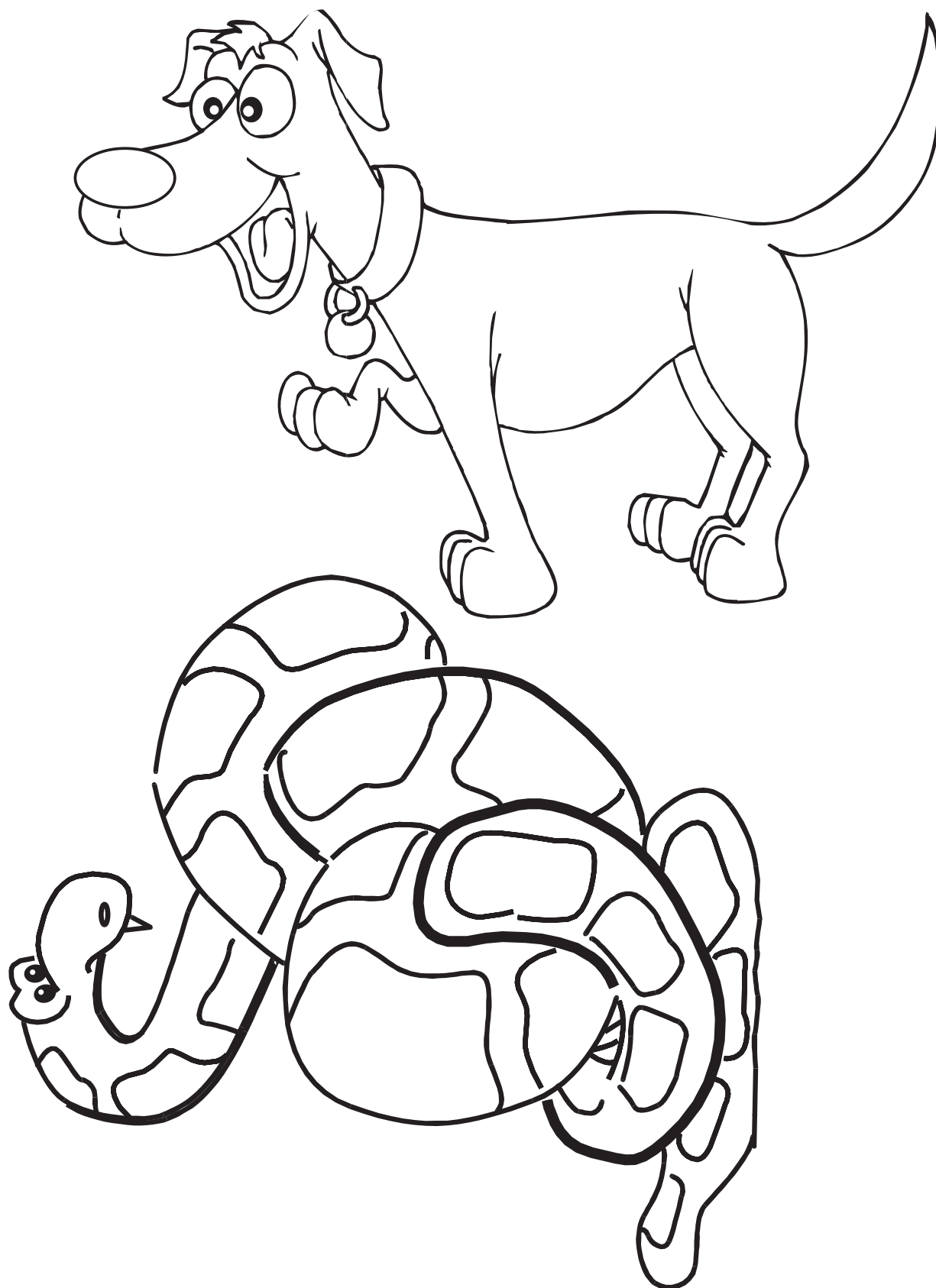
Cat Book Cover



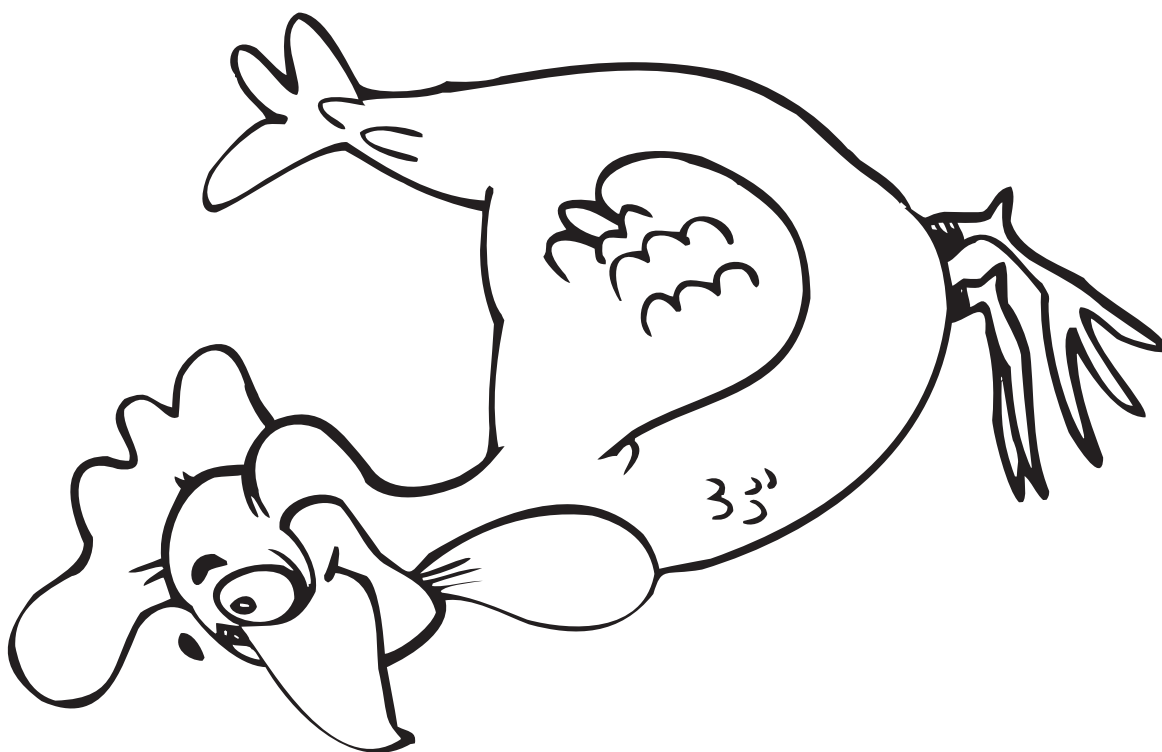
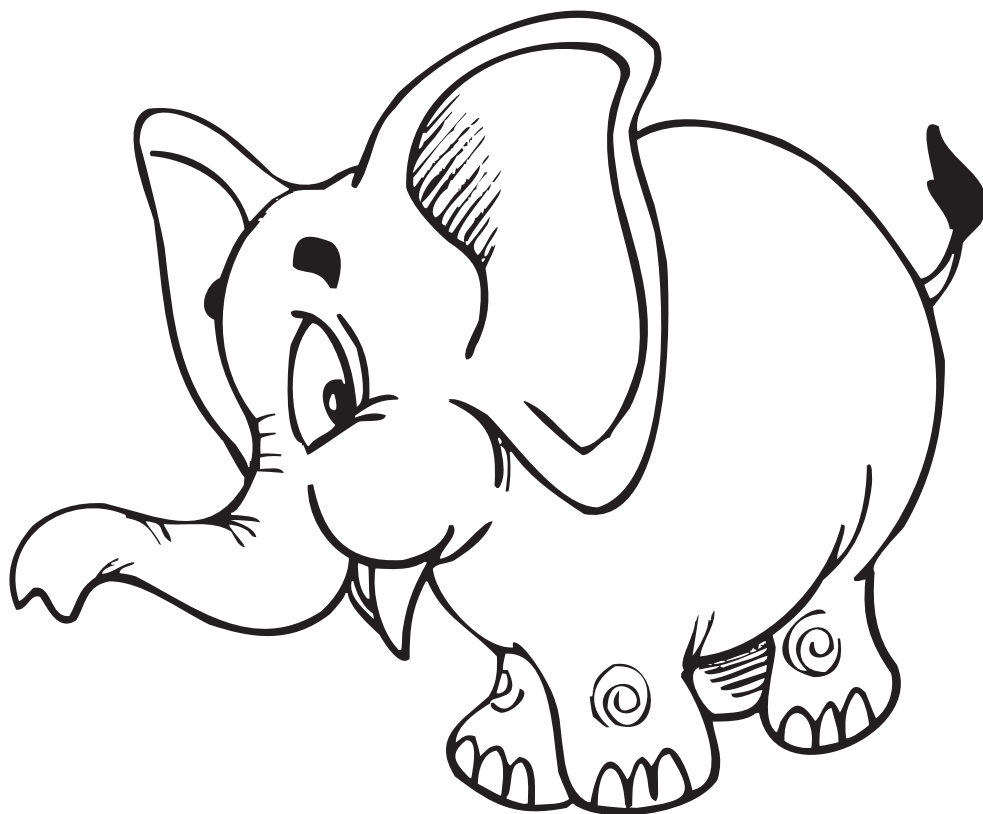
Animal Pictures



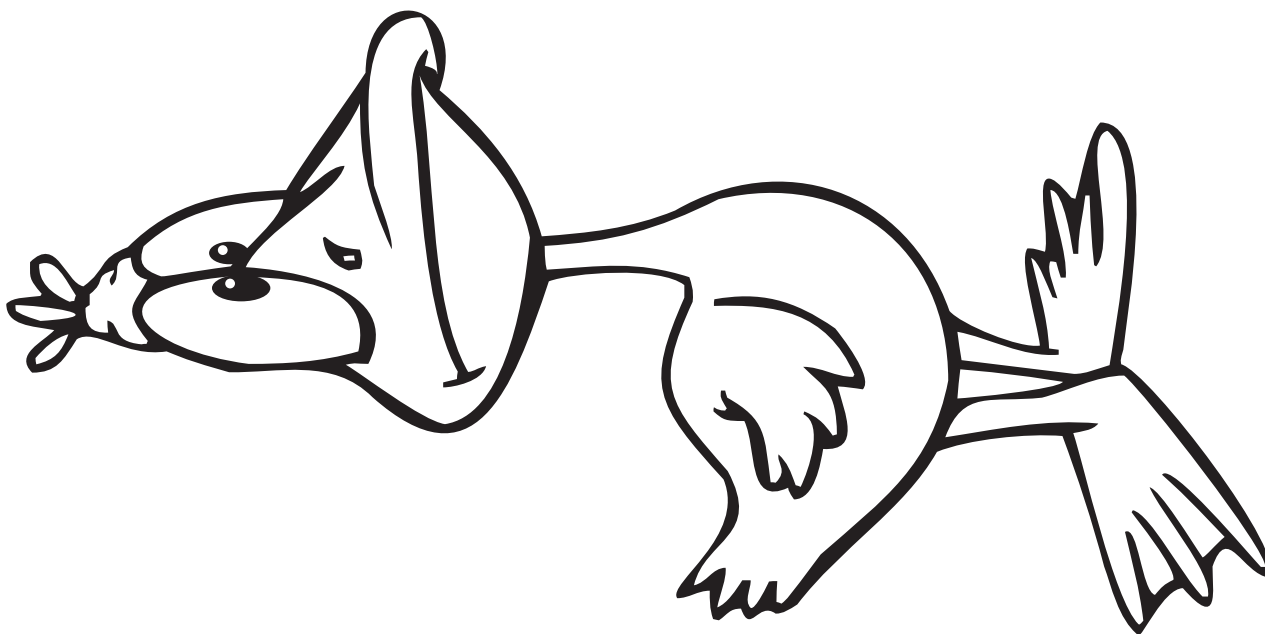
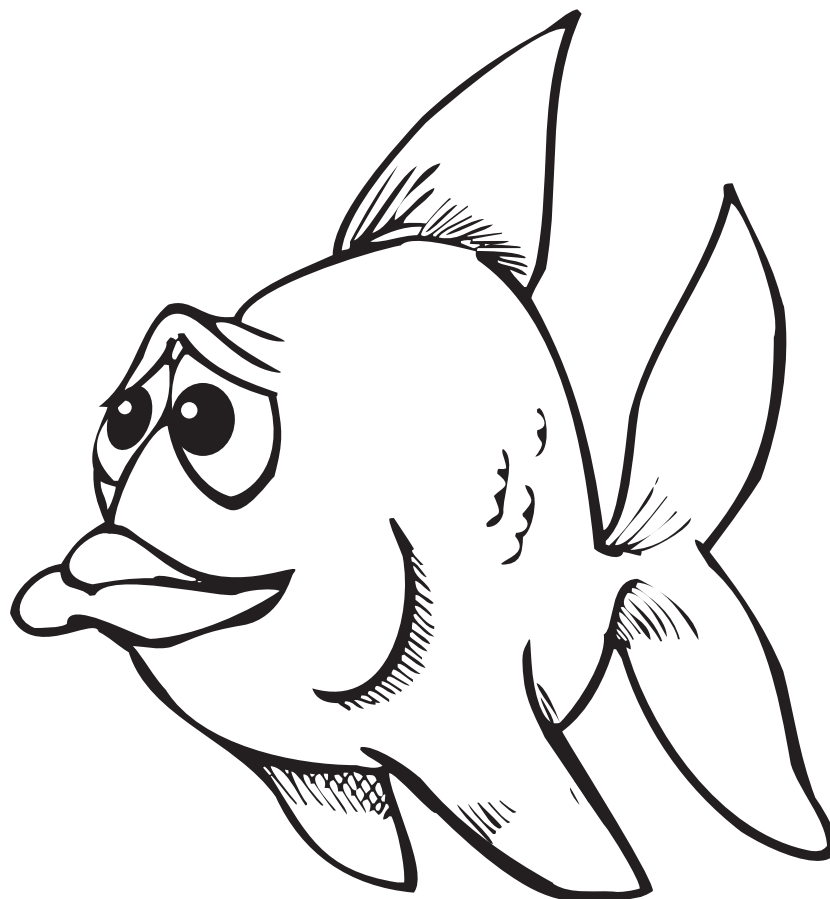
Animal Pictures



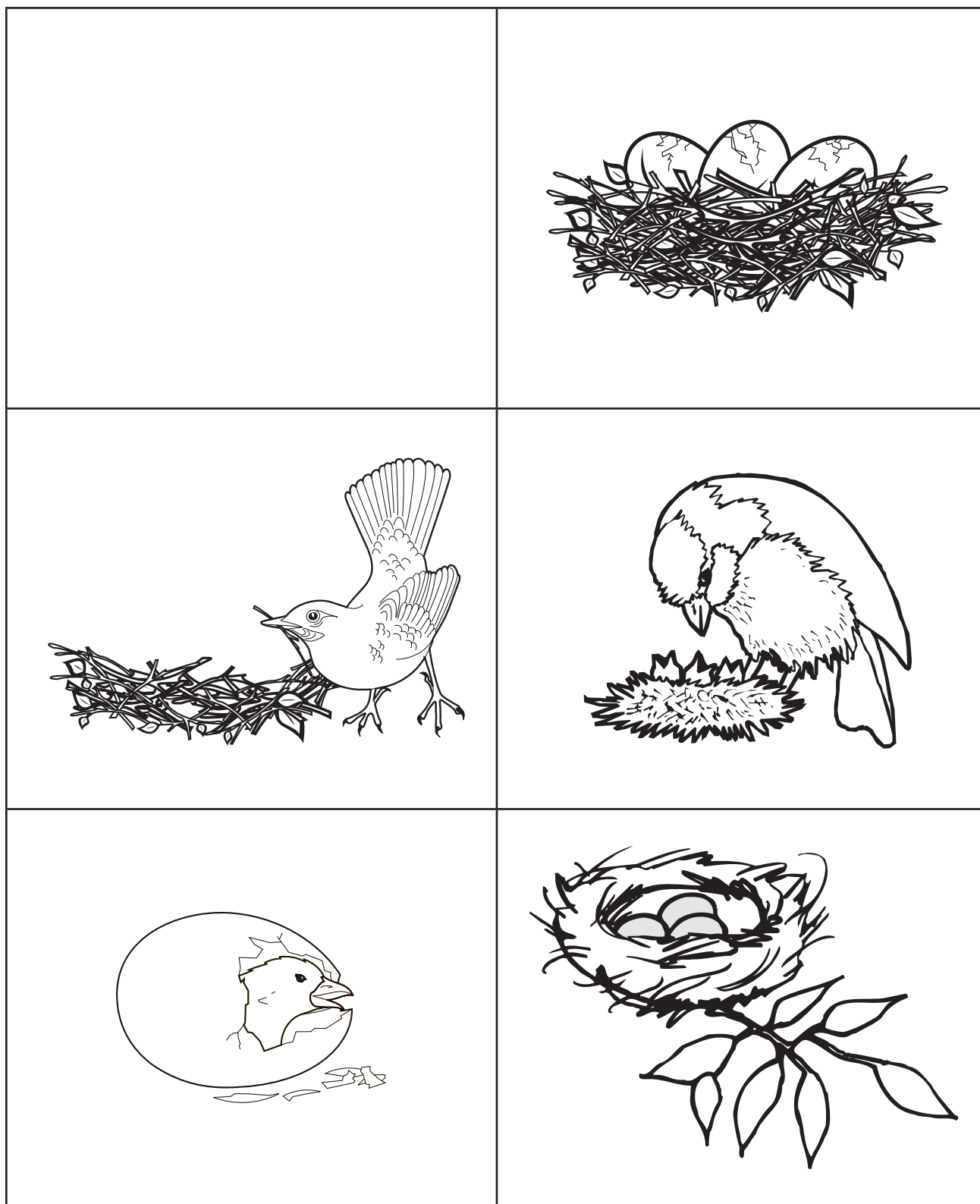
Animal Pictures



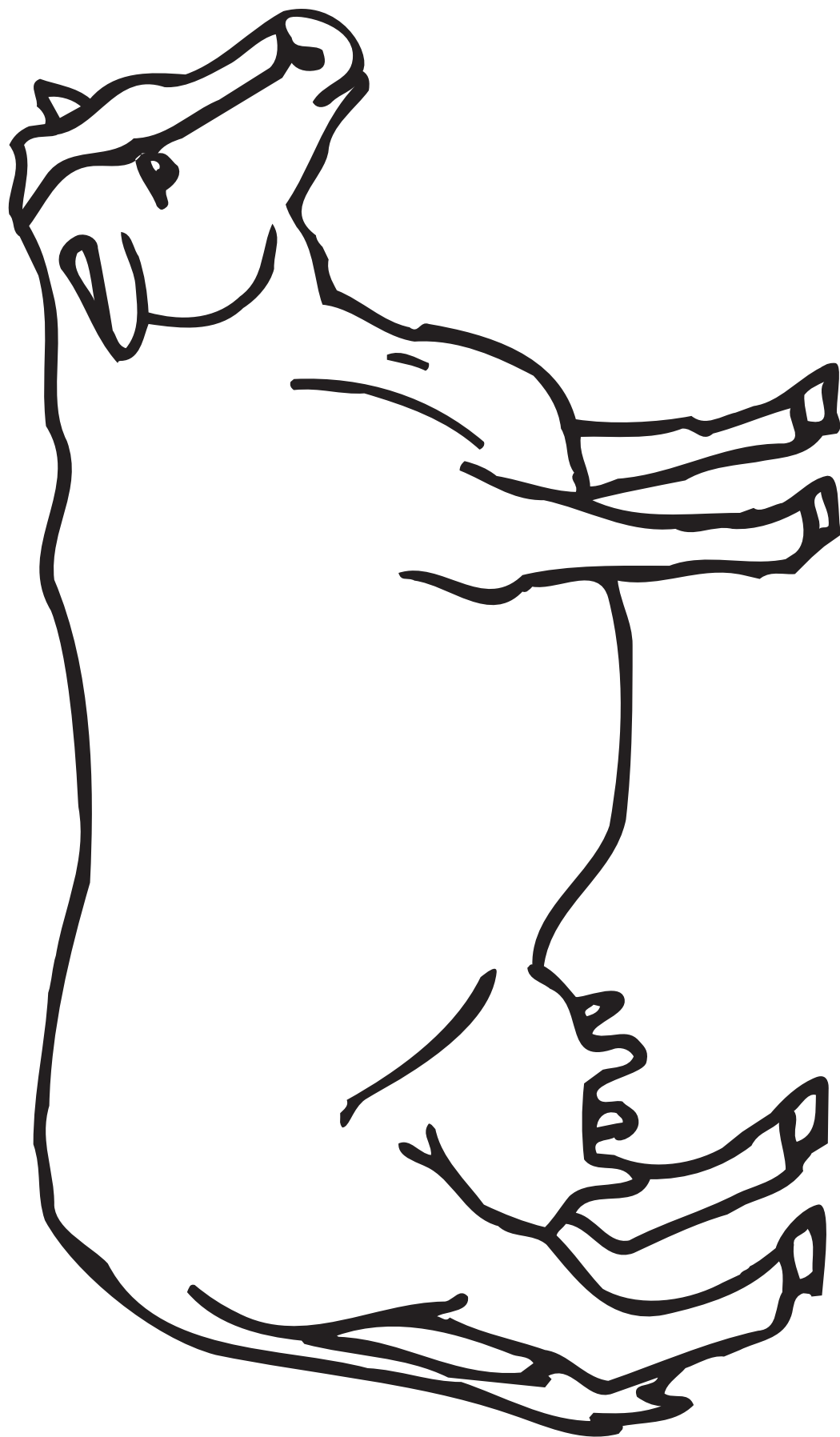
Animal Pictures



How an Egg Hatches



Cow

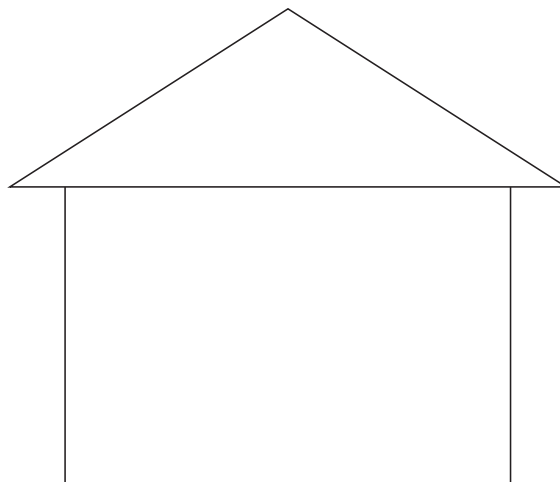


Name _____

Three Little Pigs Houses

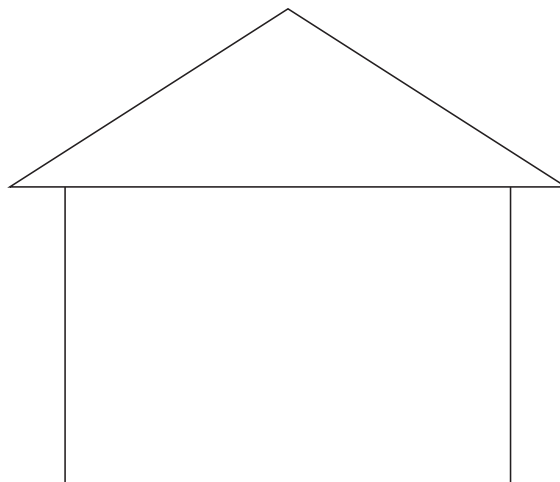
The first house was made out of

_____.



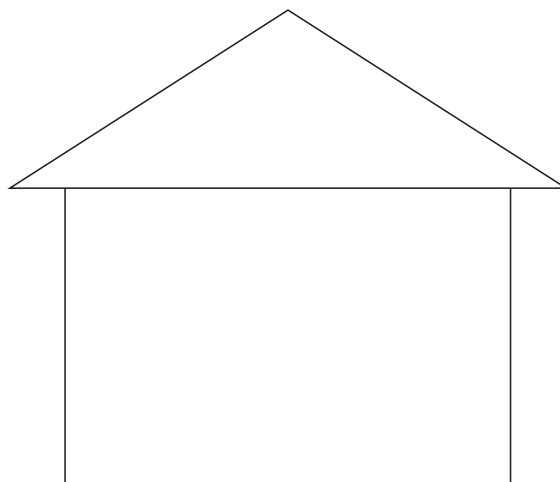
The second house was made out of

_____.



The third house was made out of

_____.



Mrs. Wishy Washy Characters

